



2021-2022  
**CATALOG**



## About PeproTech

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PeproTech creates the building blocks of your life science research by manufacturing high-quality products that advance scientific discovery and human health. Over the past 33 years, the company has grown into a global enterprise with state-of-the-art manufacturing facilities in the US, and offices around the world.

With over 2,000 products PeproTech has developed and refined innovative protocols to ensure quality, reliability and consistency.

Our mission is to provide the highest quality products and premium support that address the needs and demands of today's scientists and researchers.

We pride ourselves on being a trusted partner within the scientific community.

- Comprehensive line of Cytokines and Antibodies
- GMP Cytokines for Cell, Gene and Tissue Therapy
- Animal-Free Cytokines
- ELISA Development Kits
- Cell Culture Media Kits / Supplements

# Ordering Information

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## Hours of Operation:

**Extended hours from 8:00 AM to 8:00 PM (Eastern Standard Time) Monday - Friday. To place an order or request a catalog after business hours, or on weekends, you may send us a fax or visit our website.**

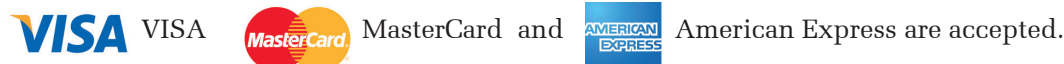
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**Website:** [www.peprotech.com](http://www.peprotech.com)

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## Method of Payment:

Payment terms are net thirty (30) days. 1.5% interest per month may be charged on past due accounts.



## Prices and Payment Terms:

**Prices will remain in effect until December 31, 2022.** All prices listed in this catalog are in U.S. Dollars. Prices are subject to change without notice. Prices in this catalog are not valid for distributors. Payment terms are net 30 days from receipt of invoice.

## Shipping:

PeproTech's products have been formulated to allow shipment at ambient temperature. If your purchase order is received before 8:00 pm (EST), all available items are shipped by Federal Express for next day delivery.

## Return Policy:

Any claim for credit or return goods must be made within 7 days of receipt. PeproTech will not accept returned products without prior authorization. No credit or replacement will be issued without a return authorization number. All returns are subject to a 20% return fee unless the products are returned due to lack of conformity with the specifications in PeproTech's data sheets. Please call Customer Service for return instructions.

## Warranty:

PeproTech warrants to the original purchaser that products sold substantially conform to specifications provided with shipped products and are free from material defects. This warranty does not extend to any product which has been altered in any way by personnel other than PeproTech's employees or to any product which has been handled in a manner contrary to instructions included in product documentation. PeproTech is not responsible for patent infringement or other violations which may occur with the use of these products. PeproTech makes no warranty of the product's suitability for any purchaser's particular use; suitability for use must be determined by the purchaser or user of the products. All other warranties, expressed or implied, are disclaimed to the fullest extent allowed by law. Purchaser's sole remedy under the above warranty shall be replacement with a conforming product, a credit toward future purchases of PeproTech products or, at PeproTech's sole discretion, a refund of the price of the product. If there is a question or concern, please contact our Technical Support Department immediately so we may assist you.

## Resale:

In the absence of an expressed written agreement to the contrary, all products are sold by PeproTech, Inc. for the exclusive use of the purchaser and are not to be resold.

## Information Changes:

This catalog contains current information on PeproTech products. PeproTech reserves the right to discontinue sales of any product or to change product descriptions and/or formulations at any time without notice to purchasers.

## Product Use Limitations:

PeproTech products are offered for research use only. Not for human use. Purchasers of PeproTech products agree to comply with the provisions of applicable federal, state and local statutes, rules, regulations, ordinances and orders with use of PeproTech products.

## [www.peprotech.com](http://www.peprotech.com)

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For comprehensive information about our products, visit our new website at **[www.peprotech.com](http://www.peprotech.com)**. Our website is an easy way to get up-to-date information on new products, references, technical documents and much more. For your assurance, PeproTech's website uses secure on-line ordering. All online orders obtained Monday-Friday during normal business hours (EST) will be processed the same day.

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# GMP Cytokines



## Helping unlock the promise of Cellular Therapies and Regenerative Medicines

The rapidly evolving field of regenerative medicine offers exciting opportunities to develop new solutions for an array of diseases, injuries, and genetics disorders. With the recent expansion of our new facility, PeproTech is able to meet the demand of the advancing markets in cell, gene, and tissue therapies. PeproGMP® Cytokines offer the same safety, purity, and simplified use in *ex vivo* manufacturing processes, as described in USP (United States Pharmacopeia) Chapter <1043> Ancillary Materials for Cell, Gene, and Tissue-Engineered Products.

Consistent with U.S. federal requirements and best practices for cell therapy, gene therapy, and tissue-engineered products for clinical applications, PeproGMP® Cytokines are manufactured and tested in compliance with relevant US FDA GMP (Good Manufacturing Practices) regulations and the ISO 9001 quality management systems standard, without the use of animal-derived materials.

Future plans are in place to introduce cell culture derived GMP cytokines.

- Controlled-certified ISO7 and ISO8 Cleanrooms
- Qualification & Validation Program
- Materials Management (Including supplier qualification, controlled & qualified raw materials)
- 100% Traceability
- Personnel Training Program
- Environmental Monitoring
- Equipment Calibration & Maintenance
- Rigorous Quality Control Program
- Documentation Control & Records
- Stability Program
- Controlled Processes
- QA Review & Support
- Quality & Supply Agreement



# GMP Cytokines

PRODUCT DESCRIPTION	CATALOG NUMBER	SIZE	PRICE
PeproGMP® Human Activin A .....	GMP120-14E-50µg .....	50µg.....	\$600
PeproGMP® Human Activin A .....	GMP120-14E-100µg .....	100µg.....	\$1,000
PeproGMP® Human IL-2.....	GMP200-02-50µg.....	50µg.....	\$375
PeproGMP® Human IL-2.....	GMP200-02-100µg.....	100µg.....	\$700
PeproGMP® Human IL-2.....	GMP200-02-1mg .....	1mg.....	\$2,300
PeproGMP® Human IL-3 .....	GMP200-03-50µg.....	50µg.....	\$775
PeproGMP® Human IL-3.....	GMP200-03-100µg.....	100µg.....	\$1,450
PeproGMP® Human IL-3.....	GMP200-03-1mg .....	1mg.....	Please Inquire
PeproGMP® Human IL-6.....	GMP200-06-10µg.....	10µg.....	\$290
PeproGMP® Human IL-6.....	GMP200-06-100µg.....	100µg.....	\$1,450
PeproGMP® Human IL-7.....	GMP200-07-50µg.....	50µg.....	\$1,200
PeproGMP® Human IL-15.....	GMP200-15-50µg.....	50µg.....	\$775
PeproGMP® Human IL-15.....	GMP200-15-100µg.....	100µg.....	\$1,450
PeproGMP® Human IL-21.....	GMP200-21-50µg.....	50µg.....	\$1,200
PeproGMP® Human IL-21.....	GMP200-21-100µg.....	100µg.....	\$2,000
PeproGMP® Human EGF .....	GMP100-15-100µg.....	100µg.....	\$450
PeproGMP® Human EGF .....	GMP100-15-500µg.....	500µg.....	\$1,000
PeproGMP® Human EGF .....	GMP100-15-1mg .....	1mg.....	\$1,800
PeproGMP® Human FGF-basic.....	GMP100-18B-25µg .....	25µg.....	\$240
PeproGMP® Human FGF-basic.....	GMP100-18B-100µg .....	100µg.....	\$720
PeproGMP® Human FGF-basic.....	GMP100-18B-1mg .....	1mg.....	\$3,600
PeproGMP® Human Flt3-Ligand .....	GMP300-19-50µg.....	50µg.....	\$870
PeproGMP® Human Flt3-Ligand .....	GMP300-19-100µg.....	100µg.....	\$1,450
PeproGMP® Human Heregulinβ-1 .....	GMP100-03-50µg.....	50µg.....	\$375
PeproGMP® Human Heregulinβ-1 .....	GMP100-03-100µg.....	100µg.....	\$700
PeproGMP® Human Heregulinβ-1 .....	GMP100-03-1mg .....	1mg.....	Please inquire
PeproGMP® Human KGF .....	GMP100-19-50µg.....	50µg.....	\$775
PeproGMP® Human KGF .....	GMP100-19-100µg.....	100µg.....	\$1,450
PeproGMP® Human LIF.....	GMP300-05-50µg.....	50µg.....	\$775
PeproGMP® Human LIF.....	GMP300-05-100µg.....	100µg.....	\$1,450
PeproGMP® Human PDGF-AA .....	GMP100-13A-50µg.....	50µg.....	\$600
PeproGMP® Human PDGF-AA .....	GMP100-13A-100µg.....	100µg.....	\$1,000
PeproGMP® Human SCF.....	GMP300-07-50µg.....	50µg.....	\$775
PeproGMP® Human SCF.....	GMP300-07-100µg.....	100µg.....	\$1,450
PeproGMP® Human SCF.....	GMP300-07-1mg .....	1mg.....	Please Inquire
PeproGMP® Human TPO .....	GMP300-18-50µg.....	50µg.....	\$1,050
PeproGMP® Human TPO .....	GMP300-18-100µg.....	100µg.....	\$1,750
PeproGMP® Human VEGF <sub>165</sub> .....	GMP100-20-50µg.....	50µg.....	\$600
PeproGMP® Human VEGF <sub>165</sub> .....	GMP100-20-100µg.....	100µg.....	\$1,000
PeproGMP® Human VEGF <sub>165</sub> .....	GMP100-20-1mg .....	1mg.....	\$7,000

We are continually adding new GMP products. Please contact [gmp@peprotech.com](mailto:gmp@peprotech.com) for our most up-to-date product list.

## Quality Assurance/Quality Control

PeproTech ensures that all aspects of our quality management system from management of raw materials and equipment to facilities maintenance (environmental monitoring), manufacturing processes, audits, and inspection processes are in compliance with relevant US FDA GMPs and all applicable regulatory and standards requirements.

We perform extensive quality control testing to verify that PeproGMP® Cytokines meet rigorous standards for purity, identity, safety, activity, and consistency.

We'd love to share more about our PeproGMP® Cytokines. Contact our Quality Assurance Department at 800-436-9910 prompt number 4 or e-mail us at [gmp@peprotech.com](mailto:gmp@peprotech.com) for more information.

# Cell Culture Media Products

## PeproGrow™ hMSC Medium

### Maintenance Media for human Mesenchymal Stem Cells

PeproGrow™ hMSC Medium is a xeno-free, human serum containing, phenol red-free complete media formulation originally designed for the *in vitro* expansion of adipose-derived human mesenchymal stem cells (ADMSCs) while maintaining full multipotency. Since its design, this media formulation has been shown to be suitable for the sustained growth of adipose tissue-derived, bone marrow-derived, umbilical cord-derived, placental-derived, and urine-derived hMSCs in both adherent and suspension culture. For optimal results, culturing should be conducted on a surface coated with PeproTech's Animal-Free Human Vitronectin Matrix as a surface-coating reagent; however, other suitable extracellular matrix (ECM) proteins, such as fibronectin or vitronectin, can be used. PeproGrow™ hMSC Medium was designed and developed in collaboration with American CryoStem Corporation, and is supplied as a 500mL bottle of PeproGrow™ hMSC Basal Medium containing a human serum component, and a separate, lyophilized vial of animal-free PeproGrow™ hMSC Growth Factor Supplement. The addition of the separate, lyophilized growth factor supplement to the basal medium results in a complete medium containing all growth factors and supplements necessary for optimal expansion of human mesenchymal stem cells in culture. Additional companion products are available separately and include the Animal-Free Human Vitronectin Matrix and Buffer Kit (catalog number AF-VMB-220).



KIT/COMPONENTS	CATALOG NUMBER	PRICE
<b>PeproGrow™ hMSC Medium 500mL Kit</b> .....	<b>XF-hMSC-500</b> .....	<b>\$275</b>
PeproGrow™ hMSC Basal Medium .....	BM-XF-hMSC-500 .....	N/A
PeproGrow™ hMSC Growth Factor Supplement .....	GF-XF-hMSC-500.....	N/A

## Companion Products for PeproGrow™ hMSC Medium

KIT/COMPONENTS	CATALOG NUMBER	PRICE
<b>Animal-Free Human Vitronectin Matrix and Buffer Kit</b> .....	<b>AF-VMB-220</b> .....	<b>\$60</b>
Animal-Free Human Vitronectin Matrix (500µg).....	.....	N/A
PBS + Kolliphor P 188 (220mL).....	.....	N/A



# Cell Culture Media Products

## PeproGrow™ hESC Medium

### Maintenance Medium for hESCs and hiPSCs

PeproTech's PeproGrow™ hESC Media products are comprised of complete, chemically-defined formulations designed for the feeder-free expansion and maintenance of both human embryonic stem cells (hESCs) and human induced pluripotent stem cells (iPSCs). Intended for the culturing of hESCs and iPSCs in the undifferentiated, pluripotent state (Nanog+/Lin28+/Tra-1-60+/SSEA1-/SSEA4+/Oct4+), these formulations demonstrate less than 15% spontaneous differentiation as indicated by immunofluorescent staining and flow cytometry. These proprietary formulations were designed and developed by PeproTech in collaboration with the Stem Cell Training Course at Rutgers University. Each PeproGrow™ hESC Medium Kit includes a bottle of basal medium and a separate, lyophilized component of PeproTech's recombinant growth factors. Additional companion products are available separately and include the Animal-Free Human Vitronectin Matrix and Buffer Kit (catalog number AF-VMB-220), and the Cell Passaging/Non-Enzymatic Detachment Buffer (catalog number CPD-125). PeproTech's Animal-Free Human Vitronectin Matrix and Buffer Kit can be used following either a surface-coating or premix method (optimization may be required).



**PeproGrow™ hESC Medium Kit** is an insulin-free formulation, in which insulin is replaced by a unique activator of similar pathways to eliminate possible interference during the measurement of insulin production in subsequently differentiated cells.

KIT/COMPONENTS	CATALOG NUMBER	PRICE
<b>PeproGrow hESC Medium 500mL Kit</b> .....	<b>hESC-500</b> .....	<b>\$200</b>
PeproGrow™ hESC Basal Medium.....	BM-hESC-500.....	\$150
PeproGrow™ hESC Growth Factor Component .....	GF-hESC-500 .....	\$65
<b>PeproGrow hESC Medium 100mL Kit</b> .....	<b>hESC-100</b> .....	<b>\$80</b>
PeproGrow™ hESC Basal Medium.....	BM-hESC-100.....	\$60
PeproGrow™ hESC Growth Factor Component .....	GF-hESC-100 .....	\$25

## Companion Products for PeproGrow™ hESC Medium

KIT/COMPONENTS	CATALOG NUMBER	PRICE
<b>Animal-Free Human Vitronectin Matrix and Buffer Kit</b> .....	<b>AF-VMB-220</b> .....	<b>\$60</b>
Animal-Free Human Vitronectin Matrix (500µg).....		N/A
PBS + Kollipor P 188 (220mL).....		N/A
<b>Cell Passaging/Non-Enzymatic Detachment Buffer</b> .....	<b>CPD-125</b> .....	<b>\$35</b>
PBS+HEPES+EDTA (125mL).....		N/A

# Cell Culture Media Products

## PeproGrow™ EPC, MacroV and MicroV Media

### Maintenance Media for Endothelial Cells

PeproTech offers three separate endothelial cell culture media formulations developed for the *in vitro* cultivation of: endothelial progenitor cells (EPCs) derived from bone marrow or peripheral blood (PeproGrow™ EPC Medium); endothelial cells from large vessels (PeproGrow™ MacroV); and endothelial cells from small vessels (PeproGrow™ MicroV). These media formulations maintain outstanding endothelial cell morphology and function, and increase the activity of endothelial nitric oxide synthase (eNOS), which account for a specific, crucial marker for endothelial cells. By doing this, the media provide an optimal cell culture environment for macrovascular and microvascular endothelial cells, as well as for EPCs; growing cells at rates that exceed commercially available media.

PeproTech's endothelial cell culture media kits are supplied as a 500mL bottle of basal medium and a separate growth supplement bottle that contains various essential growth factors and components for endothelial cell growth. Adding the growth supplement to the basal medium results in the complete culture medium. PeproTech's endothelial media do not contain antibiotics, antimycotics, antifungals, or phenol red, as these components can cause cell stress and masking effects that may reduce complete medium shelf life and influence experimental results.

KIT/COMPONENTS	CATALOG NUMBER	PRICE
<b>PeproGrow™ EPC Medium Kit</b> .....	<b>700-EPC</b> .....	<b>\$300</b>
PeproGrow™ Endothelial Cell Basal Medium.....	ENDO-BM.....	N/A
PeproGrow™ EPC Growth Supplement.....	GS-EPC*.....	N/A
<b>PeproGrow™ MacroV Medium Kit</b> .....	<b>700-MacroV</b> .....	<b>\$150</b>
PeproGrow™ Endothelial Cell Basal Medium.....	ENDO-BM.....	N/A
PeproGrow™ MacroV Growth Supplement.....	GS-MacroV*.....	N/A
<b>PeproGrow™ MicroV Medium Kit</b> .....	<b>700-MicroV</b> .....	<b>\$150</b>
PeproGrow™ Endothelial Cell Basal Medium.....	ENDO-BM.....	N/A
PeproGrow™ MicroV Growth Supplement.....	GS-MicroV*.....	N/A

\*Contains FBS



# Cell Culture Media Products

## PeproGrow™ AF-CHO Medium

### Maintenance Medium for CHO-S Cell Lines

PeproTech offers PeproGrow™ AF-CHO Medium, for the *in vitro* cultivation of Chinese Hamster Ovary-S cells (Thermo Fisher Scientific catalog numbers 11619-012, R800-07, or A11557-01). This medium is intended for recombinant protein expression in suspension culture. PeproGrow™ AF-CHO Medium is an animal component-free, serum-free, protein-free, complete medium formulation. This ready-to-use medium contains L-alanyl-L-Glutamine, amino acids, vitamins, salts and non-animal-derived hydrolysates, which are recommended for a 5-day batch culture with a seeding density of  $0.5 \times 10^6$  cells/mL. An adaptation process is not required for Thermo Fisher Scientific CHO-S cells.



MEDIUM	CATALOG NUMBER	VOLUME	PRICE
PeproGrow™ AF-CHO Medium .....	AF-CHO .....	1Liter .....	\$80

## PeproGrow™ HEK293 Medium

### Maintenance Medium for Human HEK293 Cells

PeproGrow™ HEK293 Medium is an animal component-free, protein-free, serum-free, chemically-defined, complete medium formulation for the *in vitro* cultivation of HEK293 cells (Thermo Fisher Scientific FreeStyle™ 293-F cells, catalog number R790-07). This medium is intended for recombinant protein expression in suspension culture, which is recommended for a 5-day batch culture with a seeding density of  $0.6 \times 10^6$  cells/mL. This ready-to-use medium contains L-alanyl-L-Glutamine, amino acids, vitamins, and salts. An adaptation process is not required for Thermo Fisher Scientific FreeStyle™ 293-F cells.



MEDIUM	CATALOG NUMBER	VOLUME	PRICE
PeproGrow™ HEK293 Medium .....	AF-CD-HEK293 .....	1Liter .....	\$80

# Cell Culture Supplement Kit

## PeproGrow-1 Serum-Free Cell Culture Media Supplement Kit

Serum-free cell culture supplement kit for adherent HEK293, HeLa, and A549 cells

PeproGrow-1 is a serum-free cell culture media supplement formulation designed to sustain the growth of adherent mammalian cell lines, and has been tested with HEK293, HeLa, and A549 cells. This kit may potentially improve the culturing conditions of other adherent cells, however suitability for cells other than those pre-tested is not guaranteed. PeproGrow-1 is an animal component-free, protein-free, chemically-defined formulation. This kit is intended to be used with DMEM/F12 basal media (Thermo Fisher Scientific catalog number 10565, or catalog number 31331 for customers located outside the USA) and contains enough material to supplement 10L of media.

Note: DMEM/F12 media can contain phenol red, or phenol red can be added at the customer's discretion. DMEM/F12 media should not contain HEPES. Another vendor's DMEM/F12 can be purchased, however, PeproTech only tests PeproGrow-1 (Catalog # 700-C100) using Thermo Fisher Scientific DMEM/F12.

- **100x Serum Replacement Solution (catalog number SR-100)** contains non-animal-derived, chemically-defined salts, designed to replace serum in HEK293, HeLa, and A549 cell culture media.
- **200x Lipid Mixture Solution (catalog number LM-200)** contains non-animal-derived fatty acids and lipids, designed to improve cell growth in serum-free media.

MEDIUM/COMPONENT	CATALOG NUMBER	PRICE
PeproGrow-1 Kit .....	700-C100 .....	\$195
Serum Replacement Solution .....	SR-100 .....	\$135
Lipid Mixture Solution .....	LM-200 .....	\$75



# ELISA Buffer Kits

## PeproTech's ELISA Buffer Kits

PeproTech offers both an ABTS ELISA Buffer Kit and a TMB ELISA Buffer Kit that have been specifically formulated for optimal performance when used in conjunction with PeproTech's ABTS ELISA Development Kits and TMB ELISA Development Kits, respectively. These buffer kits contain all of the necessary components to assay ten 96-well ELISA plates (included) and contain detailed handling instructions. All of the reagents have been sterile-filtered to minimize assay interference and maximize shelf life. These easy-to-use ELISA Buffer Kits can also be purchased as stand-alone products since the plates included are not pre-coated with capture antibody. This format allows the researcher to develop and optimize an assay for use with their own capture and detection antibodies. The actual antibody concentrations and detection ranges of the ELISA will vary.

### ABTS ELISA Buffer Kit Contents:

- 20X Plate Coating Buffer (PBS)
- 1X Blocking Buffer
- 20X Sample Diluent
- 20X Wash Buffer
- Ready-to-use ABTS Liquid Substrate
- 10 Sterile, Uncoated 96-well ELISA Plates
- 50 Plate Sealing Films
- Buffer Handling Instructions

DESCRIPTION	CATALOG NUMBER	PRICE
ABTS ELISA Buffer Kit.....	900-K00 .....	\$195

### TMB ELISA Buffer Kit Contents:

- 20X Plate Coating Buffer (PBS)
- 1X Blocking Buffer
- 20X Sample Diluent
- 20X Wash Buffer
- Ready-to-use TMB Liquid Substrate
- Ready-to-use Stop Solution
- 10 Sterile, Uncoated 96-well ELISA Plates
- 50 Plate Sealing Films
- Buffer Handling Instructions

DESCRIPTION	CATALOG NUMBER	PRICE
TMB ELISA Buffer Kit .....	900-T00 .....	\$195

# Cytokine Packages

## Dendritic Cell Cytokine Packages

### Human Dendritic Cell Cytokine Package

Contains the key components required for culturing human dendritic cells.

Catalog Number: HDC

Price: \$900

The following 2 vials are included:

- 100 µg Human IL-4
- 100 µg Human GM-CSF

### Murine Dendritic Cell Cytokine Package

Contains the key components required for culturing mouse dendritic cells.

Catalog Number: MDC

Price: \$900

The following 2 vials are included:

- 100 µg Murine IL-4
- 100 µg Murine GM-CSF

### Animal-Free Human Dendritic Cell Cytokine Package

Catalog Number: AF-HDC

Price: \$1,000

The following 2 vials are included:

- 100 µg Animal-Free Human IL-4
- 100 µg Animal-Free Human GM-CSF

### Animal-Free Murine Dendritic Cell Cytokine Package

Catalog Number: AF-MDC

Price: \$1,000

The following 2 vials are included:

- 100 µg Animal-Free Murine IL-4
- 100 µg Animal-Free Murine GM-CSF

## Hematopoietic Stem Cell Expansion Cytokine Packages

### Human Hematopoietic Stem Cell Expansion Cytokine Package

Contains the key components required for *ex vivo* human hematopoietic stem cells.

Catalog Number: HHSC3

Price: \$1,950

The following 4 vials are included:

- 100 µg Human Flt3-Ligand
- 100 µg Human SCF
- 100 µg Human TPO
- 10 µg Human IL-3

### Human Hematopoietic Stem Cell Expansion Cytokine Package

Contains the key components required for *ex vivo* human hematopoietic stem cells.

Catalog Number: HHSC6

Price: \$1,950

The following 4 vials are included:

- 100 µg Human Flt3-Ligand
- 100 µg Human SCF
- 100 µg Human TPO
- 20 µg Human IL-6

### Animal-Free Human Hematopoietic Stem Cell Expansion Cytokine Package

Catalog Number: AF-HHSC3

Price: \$2,340

The following 4 vials are included:

- 100 µg Animal-Free Human Flt3-Ligand
- 100 µg Animal-Free Human SCF
- 100 µg Animal-Free Human TPO
- 10 µg Animal-Free Human IL-3

### Animal-Free Human Hematopoietic Stem Cell Expansion Cytokine Package

Catalog Number: AF-HHSC6

Price: \$2,340

The following 4 vials are included:

- 100 µg Animal-Free Human Flt3-Ligand
- 100 µg Animal-Free Human SCF
- 100 µg Animal-Free Human TPO
- 20 µg Animal-Free Human IL-6

### Murine Hematopoietic Stem Cell Expansion Cytokine Package

Contains the key components required for *ex vivo* mouse hematopoietic stem cells.

Catalog Number: MHSC3

Price: \$1,950

The following 4 vials are included:

- 100 µg Murine Flt3-Ligand
- 100 µg Murine SCF
- 100 µg Murine TPO
- 10 µg Murine IL-3

### Murine Hematopoietic Stem Cell Expansion Cytokine Package

Contains the key components required for *ex vivo* mouse hematopoietic stem cells.

Catalog Number: MHSC6

Price: \$1,950

The following 4 vials are included:

- 100 µg Murine Flt3-Ligand
- 100 µg Murine SCF
- 100 µg Murine TPO
- 10 µg Murine IL-6

## Activin A

**Synonyms:** Inhibin beta-1, FRP, FSH (Follicle-Stimulating Hormone)-releasing protein, Erythroid Differentiation Factor (EDF)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human/Murine/Rat Activin A	120-14	<i>Insect cells</i>	26.0 kDa	2µg	10µg	\$6,500
Human/Murine/Rat Activin A	120-14E	<i>E. coli</i>	26.0 kDa	2µg	10µg	\$3,900
Human/Murine/Rat Activin A	120-14P	<i>CHO cells</i>	26.0 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human/Murine/Rat Activin A	AF-120-14E	<i>E. coli</i>	26.0 kDa	2µg	10µg	\$4,300

Additional sizes available please inquire

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human Activin A	GMP120-14E-50µg	<i>E. coli</i>	26.0 kDa	50µg	\$6,000
PeproGMP® Human Activin A	GMP120-14E-100µg	<i>E. coli</i>	26.0 kDa	100µg	\$1,000

## Adiponectin

**Synonyms:** Acrp-30, APM-1, AdipoQ, Gelatin-binding protein, GBP-28

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Adiponectin	450-24	<i>Insect cells</i>	25.9 kDa	5µg	25µg	\$5,200
Murine Adiponectin	315-26	<i>Insect cells</i>	25.8 kDa	5µg	25µg	\$5,200

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Adiponectin	500-P239	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Adiponectin	500-P239BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human Adiponectin	500-M126	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

## AITRL *Activation-Induced TNFR member Ligand*

**Synonyms:** TNFSF18, GITRL, TL-6

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human AITRL	310-22	<i>E. coli</i>	14.3 kDa	5µg	20µg	\$5,200

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human AITRL	500-P244	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human AITRL	500-P244BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot



## Aminopeptidase

**Synonyms:** none

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Aeromonas Aminopeptidase	100-10	<i>E.coli</i>	31.4 kDa	100µg	500µg	\$250

*Additional sizes available please inquire*

## Amphiregulin

**Synonyms:** AR, AREG, Colorectum cell-Derived Growth Factor (CRDGF)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Amphiregulin	100-55B	<i>E.coli</i>	11.3 kDa	10µg	50µg	\$1,500
Murine Amphiregulin	315-36	<i>E.coli</i>	11.5 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Amphiregulin	500-P322	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Amphiregulin	500-P322BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

**Key:** E = ELISA, WB = Western blot

## ANG-1, ANG-2 *Angiopoietin-1, -2*

**Synonyms:** ANG-1: ANGPT1, KIAA0003; ANG-2: ANGPT2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human ANG-1	130-06	<i>HeLa cells</i>	56.3 kDa	5µg	20µg	\$5,200
Human ANG-2	130-07	<i>CHO cells</i>	50.1 kDa	5µg	20µg	\$5,200

*Additional sizes available please inquire*

## ANGPTL-3 *Angiopoietin-like protein 3*

**Synonyms:** ANG-5, ANGPT5

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human ANGPTL-3	130-18	<i>CHO cells</i>	52.9 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*



## ANGPTL-7 *Angiopoietin-like protein 7*

**Synonyms:** Angiopoietin-related protein 7, Cornea-derived transcript 6 protein, CDT6

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human ANGPTL-7	130-22	<i>Insect cells</i>	38.2 kDa	5µg	20µg	\$5,200

*Additional sizes available please inquire*

## ApoA-1 *Apolipoprotein A-1*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human ApoA-1	350-11	<i>E.coli</i>	28.2 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human ApoA-1	500-P331	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human ApoA-1	500-P331BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## ApoE2 *Apolipoprotein E2*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human ApoE2	350-12	<i>E.coli</i>	34.3 kDa	100µg	500µg	\$350

*Additional sizes available please inquire*

## ApoE3 *Apolipoprotein E3*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human ApoE3	350-02	<i>E.coli</i>	34.4 kDa	100µg	500µg	\$350

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human ApoE3	500-P238	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human ApoE3	500-P238BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## ApoE4 *Apolipoprotein E4*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human ApoE4	350-04	<i>E.coli</i>	34.4 kDa	100µg	500µg	\$350

*Additional sizes available please inquire*

## Apo-SAA, Apo-SAA1

**Synonyms:** **Apo-SAA:** Serum amyloid A protein (SAA), Serum amyloid A apolipoprotein, Amyloid fibril protein AA, TP53I4, PIG4; **APO-SAA1:** Serum amyloid A-1 protein

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Apo-SAA	300-13	<i>E.coli</i>	11.7 kDa	10µg	50µg	\$800
Human Apo-SAA1	300-53	<i>E.coli</i>	11.7 kDa	10µg	50µg	\$1,400

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human Apo-SAA1	AF-300-53	<i>E.coli</i>	11.7 kDa	10µg	50µg	\$1,650

*Additional sizes available please inquire*

## APRIL *A Proliferation-Inducing Ligand*

**Synonyms:** TNFSF13, TRDL-1, TALL-2, CD256

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human APRIL	310-10C	Insect cells	16.3 kDa	2µg	10µg	\$5,200
Murine APRIL	315-13	<i>E.coli</i>	21.9 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human APRIL	500-P192	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human APRIL	500-P192BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Arg-C

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
<i>Lysobacter Enzymogenes</i> Arg-C	450-54	Insect cells	26.8 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

## Arginine Deiminase

**Synonyms:** ADI

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
<i>Mycoplasma Arginine Deiminase</i>	150-12	<i>E.coli</i>	46.3 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

## Artemin

**Synonyms:** ART, ARTN, Enovin, Neublastin

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Artemin	450-17	<i>E.coli</i>	24.2 kDa	5µg	20µg	\$3,000
Murine Artemin	450-58	<i>E.coli</i>	24.2 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human Artemin	AF-450-17	<i>E.coli</i>	24.2 kDa	5µg	20µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Artemin	500-P245	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Artemin	500-P245BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## 4-1BB Ligand

**Synonyms:** TNFSF9, CD137L

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human 4-1BB Ligand	310-11	<i>E.coli</i>	19.5 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human 4-1BB Ligand	AF-310-11	<i>E.coli</i>	19.5 kDa	5µg	20µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human 4-1BB Ligand	500-P169	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human 4-1BB Ligand	500-P169BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## 4-1BB Receptor

**Synonyms:** TNFRSF9, CD137, T-cell antigen ILA, CDw137

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human 4-1BB Receptor	310-15	<i>E.coli</i>	17.7 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human 4-1BB Receptor	500-P167G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human 4-1BB Receptor	500-P167GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human 4-1BB Receptor	ABTS CATALOG # 900-K208	PRICE: \$320
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## B7-1 Fc

**Synonyms:** B7, BB1, CD80

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human B7-1 Fc	310-32	CHO cells	50.0 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Murine B7-1	500-P128	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine B7-1	500-P128BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## B7-2 Fc

**Synonyms:** B70, CD86, ETC1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human B7-2 Fc	310-33	CHO cells	51.2 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

## B7-H2 Fc

**Synonyms:** Inducible Costimulator-Ligand (ICOSL), B7 homolog 2, B7-like protein Gl50, B7-related protein 1 (B7RP-1), CD275

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human B7-H2 Fc	310-37	CHO cells	104.9 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

## BAFF *B-cell Activating Factor belonging to the TNF Family*

**Synonyms:** TNFSF13B, TNFSF20, TALL-1, BLyS, THANK, ZTNF4, CD257

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BAFF	310-13	<i>E.coli</i>	17.0 kDa	5µg	20µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human BAFF	AF-310-13	<i>E.coli</i>	17.0 kDa	5µg	20µg	\$5,700

*Additional sizes available please inquire*

*BAFF continued on next page...*

## BAFF *B-cell Activating Factor belonging to the TNF Family (continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human BAFF	500-P163	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BAFF	500-P163BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Human BAFF	500-P163G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BAFF	500-P163GBT	Goat	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human BAFF	500-M64	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

## BAFF Receptor *B-cell Activating Factor belonging to the TNF Receptor Family*

**Synonyms:** BAFFR, TNFRSF13C, BLyS Receptor 3, CD268

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BAFF Receptor	310-13R	<i>E.coli</i>	7.7 kDa	10µg	50µg	\$1,500

Additional sizes available please inquire

## BCA-1/BLC (CXCL13) *B-cell Attracting Chemokine-1*

**Synonyms:** BLR1 Ligand

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BCA-1 (CXCL13)	300-47	<i>E.coli</i>	10.3 kDa	5µg	20µg	\$3,000
Murine BCA-1/BLC (CXCL13)	250-24	<i>E.coli</i>	9.8 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human BCA-1 (CXCL13)	500-P141	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BCA-1 (CXCL13)	500-P141BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## BCMA *B-Cell Maturation Antigen*

**Synonyms:** TNFRSF17, BCM, CD269

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BCMA	310-16	<i>E.coli</i>	5.3 kDa	5µg	20µg	\$5,200

Additional sizes available please inquire

## BD-1,-2,-3,-4,-5 $\beta$ -Defensins 1-5

**Synonyms:** **BD-1:** DEFB1, HBD1; **BD-2:** DEFB2, DEFB4A, Skin-Antimicrobial Peptide 1, SAP1; **BD-3:** DEFB3, DEFB103A; **BD-4:** Beta-Defensin 104, DEFB4; **BD-5:** BD5, DEFB105a, DEFB5

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A		Size B
				\$80	\$195	1mg
Human BD-1 (36 a.a.)	300-51	<i>E.coli</i>	3.9 kDa	5µg	20µg	\$3,000
Human BD-1 (47 a.a.)	300-51A	<i>E.coli</i>	5.0 kDa	5µg	20µg	\$3,000
Human BD-2	300-49	<i>E.coli</i>	4.3 kDa	5µg	20µg	\$3,000
Murine BD-2	250-40	<i>E.coli</i>	5.5 kDa	5µg	20µg	\$3,000
Human BD-3	300-52	<i>E.coli</i>	5.1 kDa	5µg	20µg	\$3,000
Murine BD-3	250-41	<i>E.coli</i>	4.6 kDa	5µg	20µg	\$3,000
Human BD-4	300-65	<i>E.coli</i>	6.0 kDa	5µg	20µg	\$3,000
Human BD-5	300-68	<i>E.coli</i>	5.8 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A		Size B
				\$95	\$215	1mg
Murine BD-3	AF-250-41	<i>E.coli</i>	4.6 kDa	5µg	20µg	\$3,300
Human BD-5	AF-300-68	<i>E.coli</i>	5.8 kDa	5µg	20µg	\$3,300

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A		Size B
				\$195	\$250	1mg
Anti-Human BD-1	500-P253	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BD-1	500-P253BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human BD-2	500-P161G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BD-2	500-P161GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Human BD-3	500-P241	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BD-3	500-P241BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human BD-4	500-P268	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BD-4	500-P268BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human BD-5	500-P323	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BD-5	500-P323BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human BD-1	<b>ABTS CATALOG #</b> 900-K202	<b>PRICE:</b> \$320
Human BD-2	<b>ABTS CATALOG #</b> 900-K172	<b>PRICE:</b> \$320
Human BD-2	<b>TMB CATALOG #</b> 900-T172	<b>PRICE:</b> \$320
Human BD-3	<b>ABTS CATALOG #</b> 900-K210	<b>PRICE:</b> \$320
Human BD-4	<b>ABTS CATALOG #</b> 900-K435	<b>PRICE:</b> \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human BD-1	<b>ABTS CATALOG #</b> 900-M202	<b>PRICE:</b> \$100
Human BD-2	<b>ABTS CATALOG #</b> 900-M172	<b>PRICE:</b> \$100
Human BD-2	<b>TMB CATALOG #</b> 900-TM172	<b>PRICE:</b> \$100
Human BD-3	<b>ABTS CATALOG #</b> 900-M210	<b>PRICE:</b> \$100
Human BD-4	<b>ABTS CATALOG #</b> 900-M435	<b>PRICE:</b> \$100

## BDNF *Brain-Derived Neurotrophic Factor*

**Synonyms:** Abrineurin

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human/Murine/Rat BDNF	450-02	<i>E.coli</i>	27.0 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human/Murine/Rat BDNF	AF-450-02	<i>E.coli</i>	27.0 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human/Murine/Rat BDNF	500-P84	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-H/M/R BDNF	500-P84BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## Betacellulin

**Synonyms:** BTC

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human Betacellulin	100-50	<i>E.coli</i>	9.0 kDa	5µg	20µg	\$3,000
Murine Betacellulin	315-21	<i>E.coli</i>	9.0 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human Betacellulin	500-P254	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Betacellulin	500-P254BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human Betacellulin	ABTS CATALOG # 900-K372	PRICE: \$320
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## BMP-2 *Bone Morphogenetic Protein-2*

**Synonyms:** BMP-2A

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human/Murine/Rat BMP-2	120-02	<i>E.coli</i>	26.0 kDa	2µg	10µg	\$3,900
Human/Murine/Rat BMP-2	120-02C	CHO cells	25.8 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human/Murine/Rat BMP-2	AF-120-02	<i>E.coli</i>	26.0 kDa	2µg	10µg	\$4,300

*Additional sizes available please inquire*

*BMP-2 continued on next page...*

## BMP-2 *Bone Morphogenetic Protein-2 (continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human/Murine/Rat BMP-2	500-P195	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-H/M/R BMP-2	500-P195BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human/Murine/Rat BMP-2	<b>ABTS CATALOG #</b>	900-K255	<b>PRICE:</b>	\$320
Human/Murine/Rat BMP-2	<b>TMB CATALOG #</b>	900-T255	<b>PRICE:</b>	\$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human/Murine/Rat BMP-2	<b>ABTS CATALOG #</b>	900-M255	<b>PRICE:</b>	\$100
Human/Murine/Rat BMP-2	<b>TMB CATALOG #</b>	900-TM255	<b>PRICE:</b>	\$100

## BMP-3 *Bone Morphogenetic Protein-3*

Synonyms: Osteogenin, BMP-3A

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BMP-3	120-24B	<i>E.coli</i>	25.2 kDa	10µg	50µg	\$1,500

Additional sizes available please inquire

## BMP-4 *Bone Morphogenetic Protein-4*

Synonyms: BMP-2B, DVR4

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BMP-4	120-05	HeLa cells	25.6 kDa	1µg	5µg	\$7,000
Human BMP-4	120-05ET	<i>E.coli</i>	23.9 kDa	2µg	10µg	\$3,900
Murine BMP-4	315-27	<i>E.coli</i>	23.9 kDa	2µg	10µg	\$3,900

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human BMP-4	AF-120-05ET	<i>E.coli</i>	23.9 kDa	2µg	10µg	\$4,300

Additional sizes available please inquire

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human BMP-4	500-M121	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot



## BMP-5 *Bone Morphogenetic Protein-5*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BMP-5	120-39	CHO cells	31.2 kDa	2µg	10µg	\$3,900

*Additional sizes available please inquire*

## BMP-6 *Bone Morphogenetic Protein-6*

**Synonyms:** VGR, VG-1-related protein

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BMP-6	120-06	HEK293 cells	26.2 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## BMP-7 *Bone Morphogenetic Protein-7*

**Synonyms:** Osteogenic Protein-1 (OP-1)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BMP-7	120-03P	CHO cells	26.4 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human BMP-7	500-P198	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BMP-7	500-P198BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human BMP-7	500-M123	Mouse	E	500µg	\$150

Key: E = ELISA, WB = Western blot

## BMP-10 *Bone Morphogenetic Protein-10*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BMP-10	120-40	HEK293 cells	24.4 kDa	2µg	10µg	\$3,900

*Additional sizes available please inquire*

B

## BMP-13/CDMP-2 *Bone Morphogenetic Protein-13*

**Synonyms:** Cartilage-Derived Morphogenetic Protein-2, GDF-6

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BMP-13/CDMP-2	120-04	<i>E.coli</i>	27.0 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human BMP-13/CDMP-2	AF-120-04	<i>E.coli</i>	27.0 kDa	10µg	50µg	\$1,650

*Additional sizes available please inquire*

## BRAK (CXCL14) *Breast and Kidney-expressed chemokine*

**Synonyms:** bolekin, NJAC

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BRAK (CXCL14)	300-50	<i>E.coli</i>	9.4 kDa	5µg	20µg	\$3,000
Murine BRAK (CXCL14)	250-45	<i>E.coli</i>	9.4 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human BRAK (CXCL14)	500-P237	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human BRAK (CXCL14)	500-P237BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## BTLA Fc

**Synonyms:** B- and T-lymphocyte attenuator, B- and T-lymphocyte-associated protein, CD272

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human BTLA Fc	310-43	CHO cells	39.8 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## C1 Inhibitor

**Synonyms:** Plasma protease C1 inhibitor, C1inh, C1 Esterase Protein, C1-inhibiting factor, Serpin G1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human C1 Inhibitor	130-20	CHO cells	52.8 kDa	50µg	200µg	\$800

*Additional sizes available please inquire*

## C5a

**Synonyms:** Complement Component 5a, Complement 5a, CPAMD4, C3 and PZP-like alpha-2-macroglobulin domain-containing protein 4

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human C5a	300-70	<i>E.coli</i>	8.3 kDa	5µg	20µg	\$3,000
Murine C5a	315-40	<i>E.coli</i>	8.9 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human C5a	AF-300-70	<i>E.coli</i>	8.3 kDa	5µg	20µg	\$3,300

*Additional sizes available please inquire*

## C10 (CCL6)

**Synonyms:** MRP-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Murine C10 (CCL6)	250-06	<i>E.coli</i>	10.7 kDa	2µg	10µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Murine C10 (CCL6)	500-P112	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine C10 (CCL6)	500-P112BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Carboxypeptidase-B

**Synonyms:** Cpb1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Rat Carboxypeptidase-B	400-00	<i>E.coli</i>	35.1 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## Cardiotrophin-1

**Synonyms:** CT-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Cardiotrophin-1	300-32	<i>E.coli</i>	21.1 kDa	2µg	10µg	\$5,200
Murine Cardiotrophin-1	250-25	<i>E.coli</i>	21.3 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Cardiotrophin-1	500-P101	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Cardiotrophin-1	500-P101BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## sCD4 *soluble CD4*

**Synonyms:** Cluster determinant 4, T-cell surface glycoprotein CD4, Interleukin IL-16 receptor, T-cell surface antigen T4/Leu-3, Leu-3(a,b), OKT4(a-f), L3T4 (mouse)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD4	110-11	CHO cells	41.3 kDa	10µg	50µg	\$1,800

*Additional sizes available please inquire*

## sCD8α *soluble CD8α*

**Synonyms:** CD8A, T-cell surface glycoprotein CD8 alpha chain, T-lymphocyte differentiation antigen T8/Leu-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD8α	310-41	CHO cells	17.6 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## sCD14 *soluble CD14*

**Synonyms:** Monocyte differentiation antigen CD14

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD14	110-01	HEK293 cells	35.6 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sCD14	500-P320	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sCD14	500-P320BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## sCD22 *soluble CD22*

**Synonyms:** Leu-14, B-Lymphocyte cell adhesion molecule, BL-CAM, Siglec-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD22	100-01	CHO cells	75.0 kDa	5µg	20µg	\$4,800

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sCD22	500-P227	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sCD22	500-P227BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## sCD23 *soluble CD23*

**Synonyms:** CD23 antigen, Fc-epsilon-RII, Lymphocyte IgE receptor, BLAST-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD23	310-26	<i>E.coli</i>	19.2 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

## sCD27 Ligand *soluble CD27 Ligand*

**Synonyms:** TNFSF7, CD70, CD27L

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD27 Ligand	310-30	CHO cells	18.8 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## sCD28 Fc *soluble CD28 Fc*

**Synonyms:** T-cell-specific surface glycoprotein CD28, TP44

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD28 Fc	310-34	CHO cells	82.4 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

## sCD30 Ligand *soluble CD30 Ligand*

**Synonyms:** TNFSF8, CD153, CD30L

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD30 Ligand	450-42	CHO cells	21.3 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## sCD34 *soluble CD34*

**Synonyms:** Hematopoietic progenitor cell antigen CD34

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD34	310-31	CHO cells	27.4 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sCD34	500-P327	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sCD34	500-P327BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## sCD40 Ligand *soluble CD40 Ligand*

**Synonyms:** TNFSF5, TRAP, CD154, Gp39, T-BAM

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD40 Ligand	310-02	<i>E.coli</i>	16.3 kDa	10µg	50µg	\$1,500
Murine sCD40 Ligand	315-15	<i>E.coli</i>	16.4 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$195	
Human sCD40 Ligand	AF-310-02	<i>E.coli</i>	16.3 kDa	10µg	50µg	\$1,650

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sCD40 Ligand	500-P142G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sCD40 Ligand	500-P142GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human sCD40 Ligand	ABTS CATALOG #	900-K145	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human sCD40 Ligand	ABTS CATALOG #	900-M145	PRICE: \$100
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## sCD100 *soluble CD100*

**Synonyms:** Semaphorin-4D, BB18, A8, GR3

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sCD100	310-29	CHO cells	78.9 kDa	5µg	20µg	\$5,200

*Additional sizes available please inquire*

## CDNF *Cerebral Dopamine Neurotrophic Factor*

**Synonyms:** ARMETL1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human CDNF	450-05	<i>E.coli</i>	18.5 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## Chemerin

**Synonyms:** Tazarotene-Induced Gene 2 (TIG2), RARRES2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Chemerin	300-66	<i>E.coli</i>	15.6 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

## CNTF *Ciliary Neurotrophic Factor*

**Synonyms:** none

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human CNTF	450-13	<i>E.coli</i>	22.8 kDa	5µg	20µg	\$3,000
Rat CNTF	450-50	<i>E.coli</i>	22.7 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$195	
Human CNTF	AF-450-13	<i>E.coli</i>	22.8 kDa	5µg	20µg	\$3,300
Rat CNTF	AF-450-50	<i>E.coli</i>	22.7 kDa	5µg	25µg	\$3,300

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human CNTF	500-P140	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human CNTF	500-P140BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Rat CNTF	500-P79	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat CNTF	500-P79BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human CNTF	<b>ABTS CATALOG #</b> 900-K158	<b>PRICE:</b> \$320
Rat CNTF	<b>ABTS CATALOG #</b> 900-K65	<b>PRICE:</b> \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Rat CNTF	<b>ABTS CATALOG #</b> 900-M65	<b>PRICE:</b> \$100
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## CRP *C-reactive protein*

**Synonyms:** PTX1, pentraxin 1

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human CRP	500-P242	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human CRP	500-P242BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human CRP	500-M50	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

## CTACK (CCL27) *Cutaneous T-cell Attracting Chemokine*

**Synonyms:** ALP, Skinkine, Eskine

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human CTACK (CCL27)	300-54	<i>E.coli</i>	10.2 kDa	5µg	20µg	\$3,000
Murine CTACK (CCL27)	250-26	<i>E.coli</i>	10.9 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human CTACK (CCL27)	500-P294	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human CTACK (CCL27)	500-P294BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human CTACK (CCL27)	ABTS CATALOG # 900-K213	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human CTACK (CCL27)	ABTS CATALOG # 900-M213	PRICE: \$100
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## CTGF *Connective Tissue Growth Factor*

**Synonyms:** CCN2, Hypertrophic Chondrocyte-specific protein 24 (HCS24)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human CTGF	120-19	<i>E.coli</i>	11.0 kDa	5µg	20µg	\$3,900

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human CTGF	500-P252	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human CTGF	500-P252BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*CTGF continued on next page...*



## CTGF *Connective Tissue Growth Factor (continued)*

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human CTGF	ABTS CATALOG # 900-K317	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human CTGF	ABTS CATALOG # 900-M317	PRICE: \$100
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## CTGFL/WISP-2 *Connective Tissue Growth Factor-Like protein*

**Synonyms:** CCN5, CT-58

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human CTGFL/WISP-2	120-16	<i>E.coli</i>	24.3 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human CTGFL/WISP-2	500-P212	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human CTGFL/WISP-2	500-P212BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## CTLA-4 Fc

**Synonyms:** Cytotoxic T-lymphocyte-associated antigen 4, CD152

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human CTLA-4 Fc	310-05	CHO cells	78.7 kDa	50µg	200µg	\$800

*Additional sizes available please inquire*

## CXCL16

**Synonyms:** SRPSOX

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human CXCL16	300-55	<i>E.coli</i>	10.1 kDa	5µg	25µg	\$3,000
Murine CXCL16	250-28	<i>E.coli</i>	9.9 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human CXCL16	500-P200	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human CXCL16	500-P200BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine CXCL16	500-P201G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine CXCL16	500-P201GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

*CXCL16 continued on next page...*

## CXCL16

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human CXCL16	ABTS CATALOG #	900-K230	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human CXCL16	ABTS CATALOG #	900-M230	PRICE: \$100
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## CYR61

**Synonyms:** Cellular Communication Network Factor 1 (CCN1), GIG1 protein, Cysteine-rich angiogenic inducer 61, IGF-BP10

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human CYR61	120-25	<i>E.coli</i>	39.4 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

C-D

## DKK-1, -2 and -3 *Dickkopf-related proteins 1-3*

**Synonyms:** DKK-1: Dickkopf-1, SK; DKK-2: Dickkopf-2; DKK-3: Dickkopf-3, REIC

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human DKK-1	120-30	HEK293 cells	25.8 kDa	2µg	10µg	\$5,200
Human DKK-2	120-45	CHO cells	25.8 kDa	2µg	10µg	\$5,200
Human DKK-3	120-46	CHO cells	36.3 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## sDLL-1 *soluble DLL-1*

**Synonyms:** Delta-like protein-1, Delta-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sDLL-1	140-08	HEK293 cells	56.3 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## sDLL-4 *soluble DLL-4*

**Synonyms:** Delta-like protein-4, Drosophila Delta homolog 4

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sDLL-4	140-07	HEK293 cells	54.3 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

*sDLL-4 continued on next page...*

## sDLL-4 *soluble DLL-4 (continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sDLL-4	500-P279	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sDLL-4	500-P279BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## EGF *Epidermal Growth Factor*

**Synonyms:** Urogastrone, URG

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Murine EGF	315-09	<i>E.coli</i>	6.0 kDa	100µg	500µg	\$250
Rat EGF	400-25	<i>E.coli</i>	6.2 kDa	20µg	100µg	\$1,100

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human EGF	AF-100-15	<i>E.coli</i>	6.2 kDa	100µg/\$80	500µg/\$195	\$250
Murine EGF	AF-315-09	<i>E.coli</i>	6.0 kDa	100µg	500µg	\$275
Rat EGF	AF-400-25	<i>E.coli</i>	6.2 kDa	20µg	100µg	\$1,200

Additional sizes available please inquire

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human EGF	GMP100-15-100µg	<i>E.coli</i>	6.2 kDa	100µg	\$450
PeproGMP® Human EGF	GMP100-15-500µg	<i>E.coli</i>	6.2 kDa	500µg	\$1,000
PeproGMP® Human EGF	GMP100-15-1mg	<i>E.coli</i>	6.2 kDa	1mg	\$1,800

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human EGF	500-P45	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human EGF	500-P45BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Murine EGF	500-P174G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine EGF	500-P174GBT	Goat	E, WB	25µg	50µg	\$3,400
Anti-Rat EGF	500-P277	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat EGF	500-P277BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human EGF	ABTS CATALOG # 900-K05	PRICE: \$320
Murine EGF	ABTS CATALOG # 900-K179	PRICE: \$320
Rat EGF	ABTS CATALOG # 900-K390	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human EGF	ABTS CATALOG # 900-M05	PRICE: \$100
Rat EGF	ABTS CATALOG # 900-M390	PRICE: \$100

## EGF Receptor (EGFR) *Epidermal Growth Factor Receptor*

**Synonyms:** ErbB1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human EGF Receptor (EGFR)	100-15R	CHO cells	68.6 kDa	2µg	10µg	\$3,900

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human EGF Receptor (EGFR)	500-P306	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human EGF Receptor (EGFR)	500-P306BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## EGF-L7 *Epidermal Growth Factor-Like protein 7*

**Synonyms:** MEGF7, Multiple EGF-like domains protein 7, NOTCH4-like protein, VE-statin, Zneu1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human EGF-L7	100-61	<i>E.coli</i>	27.4 kDa	2µg	10µg	\$3,000

*Additional sizes available please inquire*

## EG-VEGF *Endocrine Gland-derived Vascular Endothelial Growth Factor*

**Synonyms:** Prokineticin 1, PROK1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human EG-VEGF	100-44	<i>E.coli</i>	9.6 kDa	5µg	20µg	\$3,000
Murine EG-VEGF	315-29	<i>E.coli</i>	9.6 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human EG-VEGF	500-P188G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human EG-VEGF	500-P188GBT	Goat	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human EG-VEGF	ABTS CATALOG # 900-K244	PRICE: \$320
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## EMAP-II *Endothelial monocyte-activating polypeptide II*

**Synonyms:** EMAP-2, AIMP1 (aminoacyl tRNA synthetase complex interacting multifunctional protein 1), Small inducible cytokine subfamily E member 1, Multisynthase complex auxiliary component p43, HLD3, SCYE1

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human EMAP-II	500-P172G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human EMAP-II	500-P172GBT	Goat	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## ENA-78 (CXCL5) *Epithelial Neutrophil Activating Peptide-78*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human ENA-78 (CXCL5) (5-78 a.a.)	300-22	<i>E.coli</i>	8.0 kDa	5µg	20µg	\$3,000
Human ENA-78 (CXCL5) (8-78 a.a.)	300-22B	<i>E.coli</i>	7.8 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human ENA-78 (CXCL5)	500-P91	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human ENA-78 (CXCL5)	500-P91BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Endostatin

**Synonyms:** COL18A1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Endostatin	150-01	<i>E.coli</i>	20.2 kDa	20µg	100µg	\$1,100

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Endostatin	500-P262	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Endostatin	500-P262BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Enterokinase

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Enterokinase	450-48C	CHO cells	108.7 kDa	10µg	50µg	\$1,500

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$195	
Human Enterokinase	AF-450-48C	CHO cells	108.7 kDa	10µg	50µg	\$1,650

Additional sizes available please inquire

## Eotaxin (CCL11)

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Eotaxin (CCL11)	300-21	<i>E.coli</i>	8.3 kDa	5µg	20µg	\$3,000
Murine Eotaxin (CCL11)	250-01	<i>E.coli</i>	8.4 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$195	
Human Eotaxin (CCL11)	AF-300-21	<i>E.coli</i>	8.3 kDa	5µg	20µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Eotaxin (CCL11)	500-P41	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Eotaxin (CCL11)	500-P41BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human Eotaxin (CCL11)	500-P41G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Eotaxin (CCL11)	500-P41GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine Eotaxin (CCL11)	500-P67	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine Eotaxin (CCL11)	500-P67BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human Eotaxin (CCL11)	500-M25	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human Eotaxin (CCL11)	ABTS CATALOG #	900-K69	PRICE: \$320
Murine Eotaxin (CCL11)	ABTS CATALOG #	900-K68	PRICE: \$320

## Eotaxin-2 (CCL24)

**Synonyms:** MPIF-2, CkB-6

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Eotaxin-2 (CCL24)	300-33	<i>E.coli</i>	8.8 kDa	5µg	20µg	\$3,000
Murine Eotaxin-2 (CCL24)	250-22	<i>E.coli</i>	10.3 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

*Eotaxin-2 continued on next page...*

## Eotaxin-2 (CCL24) *(continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Eotaxin-2 (CCL24)	500-P103G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Eotaxin-2 (CCL24)	500-P103GBT	Goat	E, WB	25µg	50µg	\$3,400
Anti-Murine Eotaxin-2 (CCL24)	500-P175G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine Eotaxin-2 (CCL24)	500-P175GBT	Goat	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human Eotaxin-2 (CCL24)	500-M31	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

## Eotaxin-3 (CCL26)

**Synonyms:** Small-inducible cytokine A26, Thymic stroma chemokine-1 (TSC-1)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Eotaxin-3 (CCL26)	300-48	<i>E.coli</i>	8.4 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Eotaxin-3 (CCL26)	500-P156G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Eotaxin-3 (CCL26)	500-P156GBT	Goat	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human Eotaxin-3 (CCL26)	500-M32	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human Eotaxin-3 (CCL26)	ABTS CATALOG # 900-K167	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human Eotaxin-3 (CCL26)	ABTS CATALOG # 900-M167	PRICE: \$100
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## Epigen

**Synonyms:** EPG, Epithelial mitogen

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Epigen	100-51	<i>E.coli</i>	7.9 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

## Epiregulin

**Synonyms:** EREG

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human Epiregulin	100-04	<i>E.coli</i>	5.6 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$195	1mg
Human Epiregulin	AF-100-04	<i>E.coli</i>	5.6 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## EPO

**Synonyms:** Erythropoietin, Epoetin

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human EPO	100-64	CHO cells	18.4 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human EPO	500-P318	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human EPO	500-P318BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## E-Selectin

**Synonyms:** Endothelial Leukocyte Adhesion Molecule 1 (ELAM1), CD62E, SELE

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human E-Selectin	150-15	CHO cells	58.6 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## Exodus-2 (CCL21)

**Synonyms:** 6Ckine, SLC

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human Exodus-2 (CCL21)	300-35A	<i>E.coli</i>	12.2 kDa	5µg	20µg	\$3,000
Murine Exodus-2 (CCL21)	250-13	<i>E.coli</i>	12.0 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human Exodus-2 (CCL21)	500-P109	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Exodus-2 (CCL21)	500-P109BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine Exodus-2 (CCL21)	500-P114	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine Exodus-2 (CCL21)	500-P114BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot



## Exodus-2 (CCL21) *(continued...)*

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Murine Exodus-2	ABTS CATALOG #	900-K132	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Murine Exodus-2	ABTS CATALOG #	900-M132	PRICE: \$100
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## sFas Ligand *soluble Fas Ligand*

**Synonyms:** sFasL, TNFSF6, CD95L, Apo I Ligand, APTL, APT1LG1, CD178

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human sFas Ligand	310-03H	CHO cells	17.9 kDa	2µg	10µg	\$4,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human sFas Ligand	500-P184G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sFas Ligand	500-P184GBT	Goat	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

E-F

## sFas Receptor *soluble Fas Receptor*

**Synonyms:** sFasR, TNFRSF6, CD95, Fas Antigen, Apo I

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human sFas Receptor	310-20	<i>E.coli</i>	17.6 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human sFas Receptor	500-P295	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sFas Receptor	500-P295BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Fetuin A/AHSG

**Synonyms:** Alpha-2-HS-glycoprotein, Alpha-2-Z-globulin, Ba-alpha-2-glycoprotein

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human Fetuin A/AHSG	140-13	HEK293 cells	32.9 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## FGF *Fibroblast Growth Factors*

**Synonyms:** **FGF-acidic:** Fibroblast Growth Factor-acidic, FGF-1, HBGF-1, ECGF-beta; **FGF-basic:** Fibroblast Growth Factor-basic, FGF-2, HBGF-2, Prostatropin; **FGF-4** Fibroblast Growth Factor-4, HST-1, Transforming protein KS3, HBGF-4; **FGF-5:** Fibroblast Growth Factor-5, HBGF-5, Smag-82; **FGF-6:** Fibroblast Growth Factor-6, HBGF-6, HST-2; **FGF-7: (See KGF Page);** **FGF-8a:** Fibroblast Growth Factor-8, FGF-8a, AIGF, HBGF-8; **FGF-8b:** Fibroblast Growth Factor-8, AIGF, HBGF-8; **FGF-9:** Fibroblast Growth Factor-9, GAF (Glia-Activating Factor), HBGF-9; **FGF-10:** Fibroblast Growth Factor-10, FGFA, Keratinocyte Growth Factor-2; **FGF-16:** Fibroblast Growth Factor-16, FGFG; **FGF-17:** Fibroblast Growth Factor-17, FGFH; **FGF-18:** Fibroblast Growth Factor-18, FGFI, zFGF5; **FGF-19:** Fibroblast Growth Factor-19, FGFJ; **FGF-20:** Fibroblast Growth Factor-20, FGFK; **FGF-21:** Fibroblast Growth Factor-21, FGFL; **FGF-23:** Fibroblast Growth Factor-23, FGFN; **FGF-BP-1:** Fibroblast growth factor binding protein 1, FGF-BP, FGF-binding protein 1, HBp17; **FGFR1a:** Fibroblast Growth Factor Receptor 1 alpha, BFGFR; **FGFR2a:** Fibroblast Growth Factor Receptor 2 alpha, BEK, KGFR **FGFR3:** Fibroblast Growth Factor Receptor 3 alpha, ACH, CD333, CEK2, JTK4

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A		Size B	
				\$80	\$195	1mg	
Human FGF-acidic	100-17A	<i>E.coli</i>	16.8 kDa	10µg	50µg	\$1,500	
Murine FGF-acidic	450-33A	<i>E.coli</i>	15.9 kDa	10µg	50µg	\$1,500	
Rat FGF-acidic	400-29A	<i>E.coli</i>	15.9 kDa	10µg	50µg	\$1,500	
Human FGF-basic (154 a.a.)	100-18B	<i>E.coli</i>	17.2 kDa	10µg	50µg	\$800	
Human FGF-basic (146 a.a.)	100-18C	<i>E.coli</i>	16.4 kDa	10µg	50µg	\$1,200	
Murine FGF-basic	450-33	<i>E.coli</i>	16.3 kDa	10µg	50µg	\$1,400	
Rat FGF-basic	400-29	<i>E.coli</i>	16.3 kDa	10µg	50µg	\$1,400	
Human FGF-4	100-31	<i>E.coli</i>	19.7 kDa	5µg	25µg	\$3,000	
Murine FGF-4	450-57	<i>E.coli</i>	19.0 kDa	5µg	25µg	\$3,000	
Human FGF-5	100-34	<i>E.coli</i>	27.6 kDa	10µg	50µg	\$1,500	
Human FGF-6	100-30	<i>E.coli</i>	18.7 kDa	5µg	25µg	\$3,000	
Human FGF-8a	100-25A	CHO cells	21.2 kDa	5µg	25µg	\$3,900	
Human/Murine FGF-8b	100-25	<i>E.coli</i>	22.5 kDa	5µg	25µg	\$3,000	
Human FGF-9	100-23	<i>E.coli</i>	23.2 kDa	5µg	20µg	\$3,900	
Murine FGF-9	450-30	<i>E.coli</i>	23.3 kDa	2µg	10µg	\$3,900	
Human FGF-10	100-26	<i>E.coli</i>	19.3 kDa	5µg	25µg	\$3,000	
Murine FGF-10	450-61	<i>E.coli</i>	17.0 kDa	5µg	25µg	\$3,000	
Rat FGF-10	400-42	<i>E.coli</i>	20.2 kDa	5µg	25µg	\$3,000	
Human FGF-16	100-29	<i>E.coli</i>	23.6 kDa	5µg	25µg	\$3,000	
Human FGF-17	100-27	<i>E.coli</i>	22.7 kDa	5µg	25µg	\$3,000	
Human FGF-18	100-28	<i>E.coli</i>	20.1 kDa	5µg	25µg	\$3,000	
Human FGF-19	100-32	<i>E.coli</i>	21.8 kDa	5µg	25µg	\$3,000	
Human FGF-20	100-41	<i>E.coli</i>	23.2 kDa	3µg	15µg	\$3,900	
Human FGF-21	100-42	<i>E.coli</i>	19.5 kDa	5µg	25µg	\$3,000	
Murine FGF-21	450-56	<i>E.coli</i>	20.1 kDa	5µg	25µg	\$3,000	
Human FGF-23	100-52	<i>E.coli</i>	25.5 kDa	5µg	20µg	\$3,900	
Murine FGF-23	450-55	<i>E.coli</i>	25.5 kDa	5µg	20µg	\$3,900	
Human FGF-BP-1	100-66	<i>E.coli</i>	23.9 kDa	5µg	25µg	\$3,900	
Human FGFR1a (IIIc) Fc	160-02	CHO cells	65.2 kDa	10µg	50µg	\$1,500	
Human FGFR2a (IIIc) Fc	160-03	CHO cells	65.6 kDa	10µg	50µg	\$1,500	
Human FGFR3 (IIIc) Fc	160-05	CHO cells	128.3 kDa	10µg	50µg	\$1,500	

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A		Size B	
				\$95	\$215	1mg	
Human FGF-acidic	AF-100-17A	<i>E.coli</i>	16.8 kDa	10µg	50µg	\$1,650	
Bovine FGF-basic	AF-450-62	<i>E.coli</i>	17.1 kDa	10µg	50µg	\$850	
Human FGF-basic (154 a.a.)	AF-100-18B	<i>E.coli</i>	17.2 kDa	10µg	50µg	\$850	

*FGF Superfamily continued on next page...*

## FGF *Fibroblast Growth Factors (Continued)*

### Animal-Free Cytokines (continued)

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human FGF-basic (146 a.a)	AF-100-18C	<i>E.coli</i>	16.4 kDa	10µg	50µg	\$1,300
Murine FGF-basic	AF-450-33	<i>E.coli</i>	16.3 kDa	10µg	50µg	\$1,650
Human FGF-4	AF-100-31	<i>E.coli</i>	19.7 kDa	5µg	25µg	\$3,300
Human FGF-6	AF-100-30	<i>E.coli</i>	18.7 kDa	5µg	25µg	\$3,300
Human/Murine FGF-8b	AF-100-25	<i>E.coli</i>	22.5 kDa	5µg	25µg	\$3,300
Human FGF-9	AF-100-23	<i>E.coli</i>	23.2 kDa	5µg	20µg	\$4,300
Human FGF-10	AF-100-26	<i>E.coli</i>	19.3 kDa	5µg	25µg	\$3,300
Human FGF-18	AF-100-28	<i>E.coli</i>	20.1 kDa	5µg	25µg	\$3,300
Human FGF-19	AF-100-32	<i>E.coli</i>	21.8 kDa	5µg	25µg	\$3,300
Human FGF-21	AF-100-42	<i>E.coli</i>	19.5 kDa	5µg	25µg	\$3,300

Additional sizes available please inquire

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human FGF-basic	GMP100-18B-25µg	<i>E.coli</i>	17.2 kDa	25µg	\$240
PeproGMP® Human FGF-basic	GMP100-18B-100µg	<i>E.coli</i>	17.2 kDa	100µg	\$720
PeproGMP® Human FGF-basic	GMP100-18B-1mg	<i>E.coli</i>	17.2 kDa	1mg	\$3,600

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human FGF-acidic	500-P17	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human FGF-acidic	500-P17BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human FGF-basic	500-P18	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human FGF-basic	500-P18BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human FGF-4	500-P158	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human FGF-4	500-P158BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine FGF-9	500-P66	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine FGF-9	500-P66BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human FGF-10	500-P151G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human FGF-10	500-P151GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Human FGF-16	500-P160G	<i>Goat</i>	WB	50µg	100µg	\$1,700
Biot. Anti-Human FGF-16	500-P160GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Human FGF-17	500-P152	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human FGF-17	500-P152BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human FGF-17	500-P152G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human FGF-17	500-P152GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human FGF-basic	500-M38	<i>Mouse</i>	E, WB	500µg	\$150
Anti-Human FGF-5	500-M40	<i>Mouse</i>	E	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human FGF-basic	ABTS CATALOG # 900-K08	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human FGF-basic	ABTS CATALOG # 900-M08	PRICE: \$100
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## Flt3-Ligand

**Synonyms:** Flt3L, Fms-related tyrosine kinase 3 Ligand

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Flt3-Ligand	300-19	<i>E.coli</i>	17.6 kDa	2µg	10µg	\$3,900
Murine Flt3-Ligand	250-31L	<i>E.coli</i>	18.6 kDa	2µg	10µg	\$3,900

\*See page 12 for Cytokine Packages

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human Flt3-Ligand	AF-300-19	<i>E.coli</i>	17.6 kDa	2µg	10µg	\$4,300

\*See page 12 for Cytokine Packages

Additional sizes available please inquire

### PeperoGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeperoGMP® Human Flt3-Ligand	GMP300-19-50µg	<i>E.coli</i>	17.6 kDa	50µg	\$870
PeperoGMP® Human Flt3-Ligand	GMP300-19-100µg	<i>E.coli</i>	17.6 kDa	100µg	\$1,450

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Flt3-Ligand	500-P42	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Flt3-Ligand	500-P42BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Follistatin

**Synonyms:** FS, Activin-binding protein

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Follistatin	120-13	<i>E.coli</i>	31.5 kDa	5µg	20µg	\$5,200

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Follistatin	500-P207	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Follistatin	500-P207BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human Follistatin	ABTS CATALOG # 900-K299	PRICE: \$320
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## Fractalkine (CX3CL1)

**Synonyms:** Neurotactin, FKN

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Fractalkine (CX3CL1)	300-31	<i>E.coli</i>	8.5 kDa	5µg	20µg	\$3,000
Rat Fractalkine (CX3CL1)	400-26	<i>E.coli</i>	8.7 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Fractalkine (CX3CL1) 500-P98		<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Fractalkine (CX3CL1) 500-P98BT		<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## sFRP-1 Secreted Frizzled Related Protein-1

**Synonyms:** Secreted Apoptosis Related Protein-2, SARP-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sFRP-1	120-29	HeLa cells	32.5 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

## sFRP-4 Secreted Frizzled Related Protein-4

**Synonyms:** DDC-4 (rat homologue)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sFRP-4	120-50	CHO cells	37.8 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## FSTL1

**Synonyms:** Follistatin-like protein 1, FSL1, Follistatin-related protein 1, FRP, OCC1, OCC-1, TGF-β1-simulated clone 36, TSC-36

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human FSTL1	120-51	CHO cells	32.7 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## Furin

**Synonyms:** FUR, PACE, PCSK3

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Furin	450-47	Insect cells	63.9 kDa	2µg	10µg	\$4,800

*Additional sizes available please inquire*

## gAcrp30

**Synonyms:** Adipolean (human), APM-1, APM-1 variant, gad, globular domaine of Acrp30

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human gAcrp30/Adipolean	450-21	<i>E.coli</i>	16.6 kDa	5µg	25µg	\$3,000
Murine gAcrp30	450-27	<i>E.coli</i>	16.6 kDa	5µg	25µg	\$3,000
Human gAcrp30/Adipolean Variant	450-20	<i>E.coli</i>	18.1 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human gAcrp30/Adipolean	500-P193G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human gAcrp30/Adipolean	500-P193GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Human gAcrp30/Adipolean Variant	500-P205	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human gAcrp30/Adipolean Variant	500-P205BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Galectin-1

**Synonyms:** Galactose-specific lectin-1, Beta-galactoside-binding lectin L-14-I, Galaptin, 14 kDa lectin, S-LAC lectin-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Galectin-1	450-39	<i>E.coli</i>	14.5 kDa	10µg	50µg	\$1,500

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Galectin-1	500-P210	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Galectin-1	500-P210BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Galectin-3

**Synonyms:** Galactose-specific lectin-3, IgE-binding protein, MAC2, L-29, CPB-35

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Galectin-3	450-38	<i>E.coli</i>	26.0 kDa	10µg	50µg	\$1,500

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Galectin-3	500-P246	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Galectin-3	500-P246BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## GASP-1

**Synonyms:** GDF-Associated Serum Protein-1, GASP, KIAA0443, WFIKKNRP

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GASP-1	120-41	CHO cells	59.9 kDa	5µg	25µg	\$3,900

Additional sizes available please inquire

## GCP-2 (CXCL6)/LIX (CXCL6) *Granulocyte Chemotactic Protein-2*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GCP-2 (CXCL6)	300-41	<i>E.coli</i>	7.9 kDa	5µg	20µg	\$3,000
Murine LIX (CXCL6) (92 a.a.)	250-17	<i>E.coli</i>	9.8 kDa	5µg	20µg	\$3,000
Murine LIX (CXCL6) (70 a.a.)	250-36	<i>E.coli</i>	7.6 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human GCP-2 (CXCL6)	500-P120	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human GCP-2 (CXCL6)	500-P120BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine LIX (CXCL6)	500-P146	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine LIX (CXCL6)	500-P146BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## G-CSF *Granulocyte Colony-Stimulating Factor*

**Synonyms:** CSF-3, MGI-1G, GM-CSFβ, pluripoietin

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human G-CSF	300-23	<i>E.coli</i>	18.7 kDa	2µg	10µg	\$3,900
Murine G-CSF	250-05	<i>E.coli</i>	19.0 kDa	2µg	10µg	\$3,900
Rat G-CSF	400-37	<i>E.coli</i>	21.6 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human G-CSF	AF-300-23	<i>E.coli</i>	18.7 kDa	2µg	10µg	\$4,300
Murine G-CSF	AF-250-05	<i>E.coli</i>	19.0 kDa	2µg	10µg	\$4,300

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human G-CSF	500-P43	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human G-CSF	500-P43BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine G-CSF	500-P69	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine G-CSF	500-P69BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*G-CSF continued on next page...*



## G-CSF *Granulocyte Colony-Stimulating Factor*

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human G-CSF	500-M37	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human G-CSF	ABTS CATALOG #	900-K77	PRICE: \$320
Human G-CSF	ABTS CATALOG #	900-M77	PRICE: \$100
Murine G-CSF	ABTS CATALOG #	900-K103	PRICE: \$320

## GDF-2 *Growth/Differentiation Factor-2*

Synonyms: BMP-9

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human GDF-2	120-07	CHO cells	24.1 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

## GDF-3 *Growth/Differentiation Factor-3*

Synonyms: Vgr-2, UNQ2222/PRO248

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human GDF-3	120-22	<i>E.coli</i>	26.0 kDa	5µg	20µg	\$3,900

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human GDF-3	AF-120-22	<i>E.coli</i>	26.0 kDa	5µg	20µg	\$4,300

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human GDF-3	500-P235	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human GDF-3	500-P235BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## GDF-5 (BMP-14/CDMP-1) *Growth/Differentiation Factor-5*

Synonyms: Bone Morphogenetic Protein-14, Cartilage-Derived Morphogenetic Protein-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human GDF-5 (BMP-14/CDMP-1)	120-01	<i>E.coli</i>	27.0 kDa	10µg	50µg	\$1,500
Murine GDF-5 (BMP-14/CDMP-1)	315-24	<i>E.coli</i>	27.0 kDa	10µg	50µg	\$1,500

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human GDF-5 (BMP-14/CDMP-1)	AF-120-01	<i>E.coli</i>	27.0 kDa	10µg	50µg	\$1,650



## GDF-7 *Growth/Differentiation Factor-7*

**Synonyms:** BMP-12

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GDF-7	120-37	<i>E.coli</i>	28.0 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## GDF-11 *Growth/Differentiation Factor-11*

**Synonyms:** BMP-11

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human/Murine/Rat GDF-11	120-11	<i>E.coli</i>	25.0 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

## GDF-15/MIC-1 *Growth/Differentiation Factor-15*

**Synonyms:** Placental TGF-β, Prostate Differentiation Factor (PDF), Macrophage Inhibitory Cytokine 1, MIC-1, PLAB, NRG-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GDF-15/MIC-1	120-28	cell culture	24.6 kDa	5µg	20µg	\$7,800
Human GDF-15/MIC-1	120-28C	CHO cells	24.6 kDa	5µg	20µg	\$5,200

*Additional sizes available please inquire*

## GDNF *Glial-Derived Neurotrophic Factor*

**Synonyms:** ATF-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GDNF	450-10	<i>E.coli</i>	30.4 kDa	2µg	10µg	\$5,200
Murine GDNF	450-44	<i>E.coli</i>	30.2 kDa	2µg	10µg	\$5,200
Rat GDNF	450-51	<i>E.coli</i>	30.0 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human GDNF	AF-450-10	<i>E.coli</i>	30.4 kDa	2µg	10µg	\$5,700
Murine GDNF	AF-450-44	<i>E.coli</i>	30.2 kDa	2µg	10µg	\$5,700
Rat GDNF	AF-450-51	<i>E.coli</i>	30.0 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human GDNF	500-P81	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human GDNF	500-P81Bt	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## GLP-1 *Glucagon-Like Peptide 1*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	5mg
				\$80	\$195	
Human GLP-1	130-08	<i>E.coli</i>	3.3 kDa	200µg	1mg	\$700

*Additional sizes available please inquire*

## GITR/TNFRSF18 Fc

**Synonyms:** Tumor necrosis factor receptor superfamily member 18, Activation-inducible TNFR family receptor, Glucocorticoidinduced TNFR-related protein

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GITR/TNFRSF18 Fc	310-22R	CHO cells	40.6 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

## Glu-C

**Synonyms:** V8 Protease

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Staphylococcus Glu-C	450-46	<i>E.coli</i>	28.8 kDa	50µg	250µg	\$600

*Additional sizes available please inquire*

## GM-CSF *Granulocyte-Macrophage Colony-Stimulating Factor*

**Synonyms:** CSF-2, MGI-1GM, Pluripoietin-α

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GM-CSF	300-03	<i>E.coli</i>	14.6 kDa	5µg	20µg	\$3,250
Murine GM-CSF	315-03	<i>E.coli</i>	14.2 kDa	5µg	20µg	\$3,250
Rat GM-CSF	400-23	<i>E.coli</i>	14.5 kDa	5µg	20µg	\$3,250

*\* See page 12 for available Cytokine Packages.*

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human GM-CSF	AF-300-03	<i>E.coli</i>	14.6 kDa	5µg	20µg	\$3,500
Murine GM-CSF	AF-315-03	<i>E.coli</i>	14.2 kDa	5µg	20µg	\$3,500
Rat GM-CSF	AF-400-23	<i>E.coli</i>	14.5 kDa	5µg	20µg	\$3,500

*\* See page 12 for available Cytokine Packages.*

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human GM-CSF	500-P33	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human GM-CSF	500-P33BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine GM-CSF	500-P65	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine GM-CSF	500-P65BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Rat GM-CSF	500-P225	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat GM-CSF	500-P225BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*GM-CSF continued on next page...*

## GM-CSF *Granulocyte-Macrophage Colony-Stimulating Factor (continued...)*

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human GM-CSF	<b>ABTS CATALOG #</b> 900-K30	<b>PRICE:</b> \$320
Murine GM-CSF	<b>ABTS CATALOG #</b> 900-K55	<b>PRICE:</b> \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human GM-CSF	<b>ABTS CATALOG #</b> 900-M30	<b>PRICE:</b> \$100
Murine GM-CSF	<b>ABTS CATALOG #</b> 900-M55	<b>PRICE:</b> \$100

## GMF- $\beta$ *Glial Maturation Factor beta*

**Synonyms:** GMFB

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GMF- $\beta$	450-37	<i>E.coli</i>	16.5 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

*Additional sizes available please inquire*

## GPR15L

**Synonyms:** Antimicrobial peptide-57, AP-57, Colon-derived SUSD2 binding factor, CSBF, UNQ1833/PRO3446

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GPR15L	300-71	<i>E.coli</i>	6.5 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000
Murine GPR15L	300-72	<i>E.coli</i>	6.3 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000

*Additional sizes available please inquire*

## Granzyme B

**Synonyms:** Cytotoxic Cell Protease 1 (CCP1)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Murine Granzyme B	140-03	Baculovirus	28.9 kDa	2 $\mu$ g	10 $\mu$ g	\$7,800

*Additional sizes available please inquire*

## Gremlin-1

**Synonyms:** CKTSF1B1, DAND2, DRM, IHG-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Gremlin-1	120-42	CHO cells	18.3 kDa	10 $\mu$ g	50 $\mu$ g	\$1,500

*Additional sizes available please inquire*

## GRO- $\alpha$ , - $\beta$ , - $\gamma$ (CXCL1-3) Growth Regulated Proteins

**Synonyms:** GRO- $\alpha$ /MGSA/KC: GRO1, Melanoma Growth Stimulatory Activity  $\alpha$ , MGSA $\alpha$ , NAP-3, CINC (rat)

GRO- $\beta$ /MIP-2: GRO2, Melanoma Growth Stimulatory Activity  $\beta$ , MGSA $\beta$ , MIP-2 $\alpha$

GRO- $\gamma$ : GRO3, Melanoma Growth Stimulatory Activity  $\gamma$ , MGSA $\gamma$ , MIP-2 $\beta$

MIP-2: Macrophage Inflammatory Protein-2

### Ruo Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human GRO- $\alpha$ /MGSA (CXCL1)	300-11	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000
Murine KC (CXCL1)	250-11	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Rat GRO/KC (CXCL1)	400-10	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000
Human GRO- $\beta$ (CXCL2)	300-39	<i>E.coli</i>	7.9 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Murine MIP-2 (CXCL2)	250-15	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Rat GRO- $\beta$ /MIP-2 (CXCL2)	400-11	<i>E.coli</i>	7.9 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000
Viral MIP-2	350-03	<i>E.coli</i>	7.9 kDa	10 $\mu$ g	50 $\mu$ g	\$1,500
Human GRO- $\gamma$ (CXCL3)	300-40	<i>E.coli</i>	7.9 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$195	
Human GRO- $\alpha$ /MGSA (CXCL1)	AF-300-11	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	25 $\mu$ g	\$3,300

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human GRO- $\alpha$ /MGSA (CXCL1)	500-P92	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human GRO- $\alpha$ /MGSA (CXCL1)	500-P92BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine KC (CXCL1)	500-P115	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine KC (CXCL1)	500-P115BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat GRO/KC (CXCL1)	500-P74	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat GRO/KC (CXCL1)	500-P74BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Human GRO- $\beta$ (CXCL2)	500-P104	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human GRO- $\beta$ (CXCL2)	500-P104BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine MIP-2 (CXCL2)	500-P130	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine MIP-2 (CXCL2)	500-P130BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat GRO- $\beta$ /MIP-2 (CXCL2)	500-P75	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat GRO- $\beta$ /MIP-2 (CXCL2)	500-P75BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Human GRO- $\gamma$ (CXCL3)	500-P105	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human GRO- $\gamma$ (CXCL3)	500-P105BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human GRO- $\alpha$ /MGSA (CXCL1)	ABTS CATALOG # 900-K38	PRICE: \$320
Human GRO- $\beta$ (CXCL2)	ABTS CATALOG # 900-K120	PRICE: \$320
Rat GRO/KC (CXCL1)	ABTS CATALOG # 900-K57	PRICE: \$320
Murine KC (CXCL1)	ABTS CATALOG # 900-K127	PRICE: \$320
Murine MIP-2 (CXCL2)	ABTS CATALOG # 900-K152	PRICE: \$320

GRO- $\alpha$ , - $\beta$ , - $\gamma$  continued on next page...

## GRO- $\alpha$ , - $\beta$ , - $\gamma$ (CXCL1-3) *Growth Regulated Proteins (continued...)*

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human GRO- $\alpha$ /MGSA (CXCL1)	ABTS CATALOG #	900-M38	PRICE: \$100
Human GRO- $\beta$ (CXCL2)	ABTS CATALOG #	900-M120	PRICE: \$100
Human GRO/KC	ABTS CATALOG #	900-M57	PRICE: \$100
Murine KC (CXCL1)	ABTS CATALOG #	900-M127	PRICE: \$100
Murine MIP-2 (CXCL2)	ABTS CATALOG #	900-M152	PRICE: \$100

## Growth Hormone

**Synonyms:** Somatotropin, GH, GH-N, Growth Hormone 1, Pituitary growth hormone

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Growth Hormone	100-40	<i>E.coli</i>	22.3 kDa	10 $\mu$ g	50 $\mu$ g	\$800

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human Growth Hormone	AF-100-40	<i>E.coli</i>	22.3 kDa	10 $\mu$ g	50 $\mu$ g	\$850

*Additional sizes available please inquire*

G-H

## HB-EGF *Heparin-Binding EGF-like growth factor*

**Synonyms:** HBEGF, Diphtheria Toxin Receptor (DTR)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human HB-EGF	100-47	<i>E.coli</i>	9.7 kDa	10 $\mu$ g	50 $\mu$ g	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human HB-EGF	500-P329	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human HB-EGF	500-P329BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## HCC-1(CCL14) *Hemofiltrate CC Chemokine-1*

**Synonyms:** HCC-1/HCC-3, NCC-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human HCC-1 (CCL14) (66 a.a.)	300-38B	<i>E.coli</i>	7.8 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Human HCC-1 (CCL14) (72 a.a.)	300-38	<i>E.coli</i>	8.4 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human HCC-1 (CCL14)	500-P106	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human HCC-1 (CCL14)	500-P106BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## Heregulin $\beta$ -1

**Synonyms:** HRG, Neuregulin1 (NRG1- $\beta$ 1), HRG1- $\beta$ 1, Breast cancer cell differentiation factor p45, ARIA (Acetylcholine Receptor Inducing Activity), glial growth factor, Neu differentiation factor (rat)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Heregulin $\beta$ -1	100-03	<i>E.coli</i>	7.5 kDa	10 $\mu$ g	50 $\mu$ g	\$1,500

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human Heregulin $\beta$ -1	AF-100-03	<i>E.coli</i>	7.5 kDa	10 $\mu$ g	50 $\mu$ g	\$1,650

*Additional sizes available please inquire*

### PeperoGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeperoGMP® Heregulin $\beta$ -1	GMP100-03-50 $\mu$ g	<i>E.coli</i>	7.5 kDa	50 $\mu$ g	\$375
PeperoGMP® Heregulin $\beta$ -1	GMP100-03-100 $\mu$ g	<i>E.coli</i>	7.5 kDa	100 $\mu$ g	\$700
PeperoGMP® Heregulin $\beta$ -1	GMP100-03-1mg	<i>E.coli</i>	7.5 kDa	1mg	Inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Heregulin $\beta$ -1	500-P288	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human Heregulin $\beta$ -1	500-P288BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human Heregulin $\beta$ -1	ABTS CATALOG #	900-K316	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human Heregulin $\beta$ -1	ABTS CATALOG #	900-M316	PRICE: \$100
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## HGF *Hepatocyte Growth Factor*

**Synonyms:** Scatter Factor (SF), Hepatopoietin (HPTA)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human HGF	100-39	Insect cells	80.0 kDa	2 $\mu$ g	10 $\mu$ g	\$4,800
Human HGF	100-39H	HEK293 cells	79.4 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000
Murine HGF	315-23	Insect cells	79.3 kDa	5 $\mu$ g	20 $\mu$ g	\$3,900

*Additional sizes available please inquire*

## HPRG *Histidine-Proline-Rich Glycoprotein*

**Synonyms:** Histidine-rich glycoprotein (HRG), HRGP, THPH11

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human HPRG	100-60	CHO cells	57.7 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000

*Additional sizes available please inquire*

## HVEM-Fc

**Synonyms:** TNFSFR14, HVEM, ATAR, TR2, HveA, CD270

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human HVEM-Fc	310-27	Insect cells	41.4 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

## I-309 (CCL1)

**Synonyms:** TCA-3

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human I-309 (CCL1)	300-37	<i>E.coli</i>	8.5 kDa	2µg	10µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human I-309 (CCL1)	500-P110	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human I-309 (CCL1)	500-P110BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## ICAM-1 *Intercellular Adhesion Molecule 1*

**Synonyms:** Major group rhinovirus receptor, CD54 antigen

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human ICAM-1	150-05	CHO cells	49.5 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human ICAM-1	500-P287	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human ICAM-1	500-P287Bt	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human ICAM-1	ABTS CATALOG # 900-K464	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human ICAM-1	ABTS CATALOG # 900-M464	PRICE: \$100
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## ICOS Fc

**Synonyms:** Inducible T-cell costimulator, CD278, Activation-inducible lymphocyte immunomediatory molecule (AILIM), CRP-1, CVID1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human ICOS Fc	310-39	CHO cells	79.4 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## IFN-β Interferon-beta

**Synonyms:** Fibroblast Interferon, IFNB1, Type I interferon

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IFN-β	300-02BC	CHO cells	20.0 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IFN-β	AF-300-02B	<i>E.coli</i>	20.0 kDa	5µg	20µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IFN-β	500-P32B	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IFN-β	500-P32BBT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## IFN-γ Interferon-gamma

**Synonyms:** Immune Interferon, Type II interferon, T-cell interferon, MAF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IFN-γ	300-02	<i>E.coli</i>	16.8 kDa	20µg	100µg	\$1,100
Murine IFN-γ	315-05	<i>E.coli</i>	15.6 kDa	20µg	100µg	\$1,100
Rat IFN-γ	400-20	<i>E.coli</i>	15.6 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IFN-γ	AF-300-02	<i>E.coli</i>	16.8 kDa	20µg	100µg	\$1,200
Murine IFN-γ	AF-315-05	<i>E.coli</i>	15.6 kDa	20µg	100µg	\$1,200

*Additional sizes available please inquire*

*IFN-γ continued on next page...*



## IFN- $\gamma$ Interferon-gamma (continued)

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IFN- $\gamma$	500-P32	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IFN- $\gamma$	500-P32BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine IFN- $\gamma$	500-P119	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine IFN- $\gamma$	500-P119BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat IFN- $\gamma$	500-P122	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat IFN- $\gamma$	500-P122BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat IFN- $\gamma$	500-P122G	Goat	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat IFN- $\gamma$	500-P122GBT	Goat	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-human IFN- $\gamma$	500-M90	Mouse	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IFN- $\gamma$	ABTS CATALOG # 900-K27	PRICE: \$320
Human IFN- $\gamma$	TMB CATALOG # 900-T27	PRICE: \$320
Murine IFN- $\gamma$	ABTS CATALOG # 900-K98	PRICE: \$320
Murine IFN- $\gamma$	TMB CATALOG # 900-T98	PRICE: \$320
Rat IFN- $\gamma$	ABTS CATALOG # 900-K109	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IFN- $\gamma$	ABTS CATALOG # 900-M27	PRICE: \$100
Human IFN- $\gamma$	TMB CATALOG # 900-TM27	PRICE: \$100
Murine IFN- $\gamma$	ABTS CATALOG # 900-M98	PRICE: \$100
Murine IFN- $\gamma$	TMB CATALOG # 900-TM98	PRICE: \$100
Rat IFN- $\gamma$	ABTS CATALOG # 900-M109	PRICE: \$100

## IFN- $\lambda$ 1, - $\lambda$ 2 Interferon-lambda 1, 2

Synonyms: IFN- $\lambda$ 1: IL-29; IFN- $\lambda$ 2: IL-28A

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IFN- $\lambda$ 1	300-02L	<i>E.coli</i>	19.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Human IFN- $\lambda$ 2	300-02K	<i>E.coli</i>	19.6 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Murine IFN- $\lambda$ 2	250-33	<i>E.coli</i>	19.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IFN- $\lambda$ 1	AF-300-02L	<i>E.coli</i>	19.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,300

Additional sizes available please inquire

IFN- $\lambda$ 1, - $\lambda$ 2 continued on next page...

## IFN- $\lambda$ 1, - $\lambda$ 2 *Interferon-lambda 1, 2 (continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IFN- $\lambda$ 2	500-P247	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IFN- $\lambda$ 2	500-P247BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## IFN- $\omega$ *Interferon-omega*

**Synonyms:** IFN alpha II-1, IFNW1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	5mg
				\$80	\$195	
Human IFN- $\omega$	300-02J	<i>E.coli</i>	19.9 kDa	20 $\mu$ g	100 $\mu$ g	\$1,100

Additional sizes available please inquire

## IGF-I, IGF-I LR3 and IGF-II *Insulin-like Growth Factors I and II*

**Synonyms:** IGF-I: Somatamedin C, IGF-IA; IGF-I LR3: Long R3 IGF-I, Somatamedin C, IGF-IA IGF-II: Somatamedin A

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IGF-I	100-11	<i>E.coli</i>	7.6 kDa	100 $\mu$ g	500 $\mu$ g	\$250
Murine IGF-I	250-19	<i>E.coli</i>	7.6 kDa	10 $\mu$ g	50 $\mu$ g	\$1,400
Human IGF-I LR3	100-11R3	<i>E.coli</i>	9.1 kDa	200 $\mu$ g	1mg	\$195
Human IGF-II	100-12	<i>E.coli</i>	7.5 kDa	10 $\mu$ g	50 $\mu$ g	\$1,400

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IGF-I	AF-100-11	<i>E.coli</i>	7.6 kDa	100 $\mu$ g	500 $\mu$ g	\$275
Human IGF-I LR3	AF-100-11R3	<i>E.coli</i>	9.1 kDa	200 $\mu$ g	1mg	\$215
Human IGF-II	AF-100-12	<i>E.coli</i>	7.5 kDa	10 $\mu$ g	50 $\mu$ g	\$1,650

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IGF-I	500-P11	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IGF-I	500-P11BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine IGF-I	500-P157G	Goat	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine IGF-I	500-P157GBT	Goat	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Human IGF-II	500-P12	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IGF-II	500-P12BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Murine IGF-I	ABTS CATALOG # 900-K170	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Murine IGF-I	ABTS CATALOG # 900-M170	PRICE: \$100
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## IGF-BP *Insulin-like Growth Factor-Binding Proteins 1-7*

**Synonyms:** **IGF-BP1:** IBP-1, Placenta Protein 12 (PP12); **IGF-BP2:** IBP-2; **IGF-BP3:** IBP-3, Growth-hormone-dependent binding protein; **IGF-BP4:** IBP-4, HT29-IGF-BP, colon cancer cell growth inhibitor; **IGF-BP5:** IBP-5; **IGF-BP6:** IBP-6; **IGF-BP7:** IBP-7, Mac25, IGF binding protein-related protein-1 (IGFBP-rP1)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IGF-BP1	350-10	<i>E.coli</i>	25.4 kDa	5µg	25µg	\$3,000
Human IGF-BP2	350-06B	Insect cells	31.5 kDa	5µg	20µg	\$5,200
Human IGF-BP3	100-08	<i>E.coli</i>	28.8 kDa	5µg	25µg	\$3,000
Human IGF-BP4	350-05B	Insect cells	25.7kDa	5µg	20µg	\$5,200
Human IGF-BP5	100-05	<i>E.coli</i>	28.6 kDa	5µg	25µg	\$3,000
Human IGF-BP6	350-07B	Insect cells	22.3 kDa	5µg	20µg	\$5,200
Human IGF-BP7	350-09	<i>E.coli</i>	26.4 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IGF-BP3	AF-100-08	<i>E.coli</i>	28.8 kDa	5µg	25µg	\$3,300
Human IGF-BP7	AF-350-09	<i>E.coli</i>	26.4 kDa	5µg	25µg	\$3,300

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IGF-BP1	500-P228	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IGF-BP1	500-P228BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human IGF-BP3	500-P230	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IGF-BP3	500-P230BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human IGF-BP5	500-P232	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IGF-BP5	500-P232BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human IGF-BP7	500-P234	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IGF-BP7	500-P234BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IGF-BP1	ABTS CATALOG # 900-K315	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells

Human IGF-BP1	ABTS CATALOG # 900-M315	PRICE: \$100
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## IL-1 $\alpha$ Interleukin-1alpha

**Synonyms:** Hematopoietin-1, Lymphocyte-Activating Factor (LAF), Endogenous Pyrogen (EP), Leukocyte Endogenous Mediator (LEM), Mononuclear Cell Factor (MCF)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-1 $\alpha$	200-01A	<i>E.coli</i>	18.0 kDa	2 $\mu$ g	10 $\mu$ g	\$3,900
Murine IL-1 $\alpha$	211-11A	<i>E.coli</i>	17.9 kDa	2 $\mu$ g	10 $\mu$ g	\$3,900
Rat IL-1 $\alpha$	400-01A	<i>E.coli</i>	17.7 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-1 $\alpha$	AF-200-01A	<i>E.coli</i>	18.0 kDa	2 $\mu$ g	10 $\mu$ g	\$4,300

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-1 $\alpha$	500-P21A	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IL-1 $\alpha$	500-P21ABT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine IL-1 $\alpha$	500-P51A	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine IL-1 $\alpha$	500-P51ABT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat IL-1 $\alpha$	500-P180G	<i>Goat</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat IL-1 $\alpha$	500-P180GBT	<i>Goat</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-1 $\alpha$	ABTS CATALOG # 900-K11	PRICE: \$320
Human IL-1 $\alpha$	TMB CATALOG # 900-T11	PRICE: \$320
Murine IL-1 $\alpha$	ABTS CATALOG # 900-K82	PRICE: \$320
Rat IL-1 $\alpha$	ABTS CATALOG # 900-K204	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells

Human IL-1 $\alpha$	ABTS CATALOG # 900-M11	PRICE: \$100
Human IL-1 $\alpha$	TMB CATALOG # 900-TM11	PRICE: \$100
Murine IL-1 $\alpha$	ABTS CATALOG # 900-M82	PRICE: \$100

## IL-1 $\beta$ Interleukin-1beta

**Synonyms:** Catabolin, Lymphocyte-Activating Factor (LAF), Endogenous Pyrogen (EP), Leukocyte Endogenous Mediator (LEM), Mononuclear Cell Factor (MCF)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-1 $\beta$	200-01B	<i>E.coli</i>	17.3 kDa	2 $\mu$ g	10 $\mu$ g	\$3,900
Murine IL-1 $\beta$	211-11B	<i>E.coli</i>	17.5 kDa	2 $\mu$ g	10 $\mu$ g	\$3,900
Rat IL-1 $\beta$	400-01B	<i>E.coli</i>	17.4 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-1 $\beta$	AF-200-01B	<i>E.coli</i>	17.3 kDa	2 $\mu$ g	10 $\mu$ g	\$4,300
Murine IL-1 $\beta$	AF-211-11B	<i>E.coli</i>	17.5 kDa	2 $\mu$ g	10 $\mu$ g	\$4,300

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-1 $\beta$	500-P21BG	<i>Goat</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IL-1 $\beta$	500-P21BGBT	<i>Goat</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine IL-1 $\beta$	500-P51	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine IL-1 $\beta$	500-P51BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat IL-1 $\beta$	500-P80	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat IL-1 $\beta$	500-P80BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-1 $\beta$	500-M01B	<i>Mouse</i>	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-1 $\beta$	ABTS CATALOG #	900-K95	PRICE: \$320
Human IL-1 $\beta$	TMB CATALOG #	900-T95	PRICE: \$320
Murine IL-1 $\beta$	ABTS CATALOG #	900-K47	PRICE: \$320
Rat IL-1 $\beta$	ABTS CATALOG #	900-K91	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells

Human IL-1 $\beta$	ABTS CATALOG #	900-M95	PRICE: \$100
Human IL-1 $\beta$	TMB CATALOG #	900-TM95	PRICE: \$100
Murine IL-1 $\beta$	ABTS CATALOG #	900-M47	PRICE: \$100
Rat IL-1 $\beta$	ABTS CATALOG #	900-M91	PRICE: \$100

## IL-1RA *Interleukin-1 Receptor Antagonist*

**Synonyms:** ICIL-1RA, IRAP, IL-1RN

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-1RA	200-01RA	<i>E.coli</i>	17.2 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-1RA	AF-200-01RA	<i>E.coli</i>	17.2 kDa	20µg	100µg	\$1,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-1RA	500-P209	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-1RA	500-P209BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-1RA	ABTS CATALOG #	900-K474	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-1RA	ABTS CATALOG #	900-M474	PRICE: \$100
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## IL-2 *Interleukin-2*

**Synonyms:** T-cell Growth Factor (TCGF), Aldesleukin

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-2	200-02	<i>E.coli</i>	15.5 kDa	10µg	50µg	\$800
Murine IL-2	212-12	<i>E.coli</i>	17.2 kDa	5µg	20µg	\$2,800
Rat IL-2	400-02	<i>E.coli</i>	15.3 kDa	5µg	20µg	\$2,800

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-2	AF-200-02	<i>E.coli</i>	15.5 kDa	10µg	50µg	\$850
Murine IL-2	AF-212-12	<i>E.coli</i>	17.2 kDa	5µg	20µg	\$3,100
Rat IL-2	AF-400-02	<i>E.coli</i>	15.3 kDa	5µg	20µg	\$3,100

*Additional sizes available please inquire*

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human IL-2	GMP200-02-50µg	<i>E.coli</i>	15.5 kDa	50µg	\$375
PeproGMP® Human IL-2	GMP200-02-100µg	<i>E.coli</i>	15.5 kDa	100µg	\$700
PeproGMP® Human IL-2	GMP200-02-1mg	<i>E.coli</i>	15.5 kDa	1mg	\$2,300

*IL-2 continued on next page...*

## IL-2 *Interleukin-2 (Continued)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-2	500-P22	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-2	500-P22BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human IL-2	500-P22G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-2	500-P22GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-2	500-P111	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-2	500-P111BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Rat IL-2	500-P274	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat IL-2	500-P274BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-2	500-M02	<i>Mouse</i>	E, WB	500µg	\$150
Anti-Murine IL-2	500-M127	<i>Rat</i>	E, WB	500µg	\$150
Anti-Rat IL-2	500-M129	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-2	ABTS CATALOG # 900-K12	PRICE: \$320
Human IL-2	TMB CATALOG # 900-T12	PRICE: \$320
Murine IL-2	ABTS CATALOG # 900-K108	PRICE: \$320
Murine IL-2	TMB CATALOG # 900-T108	PRICE: \$320
Rat IL-2	ABTS CATALOG # 900-K205	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-2	ABTS CATALOG # 900-M12	PRICE: \$100
Human IL-2	TMB CATALOG # 900-TM12	PRICE: \$100
Murine IL-2	ABTS CATALOG # 900-M108	PRICE: \$100
Murine IL-2	TMB CATALOG # 900-TM108	PRICE: \$100
Rat IL-2	ABTS CATALOG # 900-M205	PRICE: \$100

## sIL-2 Receptor $\alpha$ *soluble Interleukin-2 Receptor alpha*

**Synonyms:** soluble Interleukin-2R $\alpha$ , TAC-antigen, CD25 antigen

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sIL-2 Receptor $\alpha$	200-02RC	CHO cells	24.8 kDa	5µg	25µg	\$2,800

Additional sizes available please inquire

*IL-2 Receptor a continued on next page...*

## sIL-2 Receptor $\alpha$ *soluble Interleukin-2 Receptor alpha (continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sIL-2 Receptor $\alpha$	500-P22R	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human sIL-2 Receptor $\alpha$	500-P22RBT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human sIL-2 Receptor $\alpha$	500-M02R	Mouse	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

## IL-3/IL-3 $\beta$ *Interleukin-3/ Interleukin-3 beta*

**Synonyms:** Mast Cell Growth Factor (MCGF), Multi-CSF, HCGF, P-cell stimulation factor

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-3	200-03	<i>E.coli</i>	15.0 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Murine IL-3	213-13	<i>E.coli</i>	15.1 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Rat IL-3 $\beta$	400-03	<i>E.coli</i>	16.3 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

\* See page 12 for available Cytokine Packages.

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-3	AF-200-03	<i>E.coli</i>	15.0 kDa	2 $\mu$ g	10 $\mu$ g	\$3,300
Murine IL-3	AF-213-13	<i>E.coli</i>	15.1 kDa	2 $\mu$ g	10 $\mu$ g	\$3,300

\* See page 12 for available Cytokine Packages.

Additional sizes available please inquire

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human IL-3	GMP200-03-50 $\mu$ g	<i>E.coli</i>	15.0 kDa	50 $\mu$ g	\$775
PeproGMP® Human IL-3	GMP200-03-100 $\mu$ g	<i>E.coli</i>	15.0 kDa	100 $\mu$ g	\$1,450
PeproGMP® Human IL-3	GMP200-03-1mg	<i>E.coli</i>	15.0 kDa	1mg	Inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-3	500-P23	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IL-3	500-P23BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine IL-3	500-P53	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine IL-3	500-P53BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat IL-3 $\beta$	500-P177G	Goat	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat IL-3 $\beta$	500-P177GBT	Goat	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-3	500-M03	Mouse	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

*IL-3/IL-3 $\beta$  continued on next page...*



## IL-3/IL-3 $\beta$ *Interleukin-3/ Interleukin-3 beta (continued...)*

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-3	<b>ABTS CATALOG #</b> 900-K13	<b>PRICE:</b> \$320
Murine IL-3	<b>ABTS CATALOG #</b> 900-K48	<b>PRICE:</b> \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Murine IL-3	<b>ABTS CATALOG #</b> 900-M48	<b>PRICE:</b> \$100
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## IL-4 *Interleukin-4*

**Synonyms:** BCGF, BCDF, B-cell Stimulating Factor (BSF-1)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-4	200-04	<i>E.coli</i>	15.1 kDa	5 $\mu$ g	20 $\mu$ g	\$3,250
Murine IL-4	214-14	<i>E.coli</i>	13.5 kDa	5 $\mu$ g	20 $\mu$ g	\$3,250
Rat IL-4	400-04	<i>E.coli</i>	14.0 kDa	5 $\mu$ g	20 $\mu$ g	\$3,250

\* See page 12 for available Cytokine Packages.

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-4	AF-200-04	<i>E.coli</i>	15.1 kDa	5 $\mu$ g	20 $\mu$ g	\$3,500
Murine IL-4	AF-214-14	<i>E.coli</i>	13.5 kDa	5 $\mu$ g	20 $\mu$ g	\$3,500

\* See page 12 for available Cytokine Packages.

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-4	500-P24	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IL-4	500-P24BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine IL-4	500-P54	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine IL-4	500-P54BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat IL-4	500-P94	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat IL-4	500-P94BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-4	500-M04	<i>Mouse</i>	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-4	<b>ABTS CATALOG #</b> 900-K14	<b>PRICE:</b> \$320
Human IL-4	<b>TMB CATALOG #</b> 900-T14	<b>PRICE:</b> \$320
Murine IL-4	<b>ABTS CATALOG #</b> 900-K49	<b>PRICE:</b> \$320
Murine IL-4	<b>TMB CATALOG #</b> 900-T49	<b>PRICE:</b> \$320

*IL-4 continued on next page...*

## IL-4 *Interleukin-4 (continued...)*

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-4	<b>ABTS CATALOG #</b> 900-M14	<b>PRICE:</b> \$100
Human IL-4	<b>TMB CATALOG #</b> 900-TM14	<b>PRICE:</b> \$100
Murine IL-4	<b>ABTS CATALOG #</b> 900-M49	<b>PRICE:</b> \$100
Murine IL-4	<b>TMB CATALOG #</b> 900-TM49	<b>PRICE:</b> \$100

## sIL-4 Receptor $\alpha$ *soluble Interleukin-4 Receptor alpha*

**Synonyms:** soluble Interleukin-4R $\alpha$ , CD124

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sIL-4 Receptor $\alpha$	200-04R	HEK293 cells	23.9 kDa	3 $\mu$ g	15 $\mu$ g	\$4,000
Human sIL-4 Receptor $\alpha$	200-04RC	CHO cells	23.9 kDa	5 $\mu$ g	20 $\mu$ g	\$4,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sIL-4 Receptor $\alpha$	500-P325	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human sIL-4 Receptor $\alpha$	500-P325BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## IL-5 *Interleukin-5*

**Synonyms:** EDF, BCDFII, TRF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-5	200-05	<i>E.coli</i>	26.5 kDa	2 $\mu$ g	10 $\mu$ g	\$4,300
Murine IL-5	215-15	<i>E.coli</i>	26.2 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000
Rat IL-5	400-05	<i>E.coli</i>	26.0 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-5	AF-200-05	<i>E.coli</i>	26.5 kDa	2 $\mu$ g	10 $\mu$ g	\$4,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-5	500-P25	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IL-5	500-P25BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine IL-5	500-P55	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine IL-5	500-P55BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*IL-5 continued on next page...*

## IL-5 *Interleukin-5 (continued...)*

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-5	<b>ABTS CATALOG #</b> 900-K15	<b>PRICE:</b> \$320
Murine IL-5	<b>ABTS CATALOG #</b> 900-K406	<b>PRICE:</b> \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-5	<b>ABTS CATALOG #</b> 900-M15	<b>PRICE:</b> \$100
Murine IL-5	<b>ABTS CATALOG #</b> 900-M406	<b>PRICE:</b> \$100

## IL-6 *Interleukin-6*

**Synonyms:** 26 kDa protein, IFN- $\beta$ 2, B-Cell Differentiation Factor (BCDF), B-cell Stimulatory Factor-2, BSF-2, HPGF, HSF, MGI-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-6	200-06	<i>E.coli</i>	20.9 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Murine IL-6	216-16	<i>E.coli</i>	21.7 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Rat IL-6	400-06	<i>E.coli</i>	21.7 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

\* See page 12 for available Cytokine Packages.

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-6	AF-200-06	<i>E.coli</i>	20.9 kDa	5 $\mu$ g	20 $\mu$ g	\$3,300
Murine IL-6	AF-216-16	<i>E.coli</i>	21.7 kDa	2 $\mu$ g	10 $\mu$ g	\$3,300

Additional sizes available please inquire

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human IL-6	GMP200-06-10 $\mu$ g	<i>E.coli</i>	20.9 kDa	10 $\mu$ g	\$290
PeproGMP® Human IL-6	GMP200-06-100 $\mu$ g	<i>E.coli</i>	20.9 kDa	100 $\mu$ g	\$1,450

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-6	500-P26	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IL-6	500-P26BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Human IL-6	500-P26G	<i>Goat</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IL-6	500-P26GBT	<i>Goat</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine IL-6	500-P56	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine IL-6	500-P56BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat IL-6	500-P73	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat IL-6	500-P73BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat IL-6	500-P73G	<i>Goat</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat IL-6	500-P73GBT	<i>Goat</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*IL-6 continued on next page...*

## IL-6 *Interleukin-6 (continued...)*

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-6	500-M06	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-6	ABTS CATALOG #	900-K16	PRICE: \$320
Human IL-6	TMB CATALOG #	900-T16	PRICE: \$320
Murine IL-6	ABTS CATALOG #	900-K50	PRICE: \$320
Murine IL-6	TMB CATALOG #	900-T50	PRICE: \$320
Rat IL-6	ABTS CATALOG #	900-K86	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-6	ABTS CATALOG #	900-M16	PRICE: \$100
Human IL-6	TMB CATALOG #	900-TM16	PRICE: \$100
Murine IL-6	ABTS CATALOG #	900-M50	PRICE: \$100
Murine IL-6	TMB CATALOG #	900-TM50	PRICE: \$100
Rat IL-6	ABTS CATALOG #	900-M86	PRICE: \$100

## sIL-6 Receptor $\alpha$ *soluble Interleukin-6 Receptor alpha*

**Synonyms:** soluble Interleukin-6R $\alpha$ , CD126

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sIL-6 Receptor $\alpha$	200-06RC	CHO cells	37.9 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

## IL-7 *Interleukin-7*

**Synonyms:** Lymphopoietin 1 (LP-1), pre-B-cell factor

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-7	200-07	<i>E.coli</i>	17.5 kDa	2µg	10µg	\$5,200
Murine IL-7	217-17	<i>E.coli</i>	15.0 kDa	2µg	10µg	\$5,200
Rat IL-7	400-07	<i>E.coli</i>	15.0 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-7	AF-200-07	<i>E.coli</i>	17.5 kDa	2µg	10µg	\$5,700

Additional sizes available please inquire

*IL-7 continued on next page...*

## IL-7 *Interleukin-7 (continued...)*

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human IL-7	GMP200-07-50µg	<i>E.coli</i>	17.4 kDa	50µg	\$1,200

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-7	500-P27	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-7	500-P27BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-7	500-P57	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-7	500-P57BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Rat IL-7	500-P310	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat IL-7	500-P310Bt	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-7	500-M07	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-7	ABTS CATALOG #	900-K17	PRICE: \$320
Human IL-7	ABTS CATALOG #	900-M17	PRICE: \$100

## IL-8 (CXCL8) *Interleukin-8*

**Synonyms:** Monocyte-Derived Neutrophil Chemotactic Factor (MDNCF), Neutrophil Activating Factor (NAF), NAP-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-8 (CXCL8) (72 a.a.)	200-08M	<i>E.coli</i>	8.4 kDa	5µg	25µg	\$3,000
Human IL-8 (CXCL8) (77 a.a.)	200-08	<i>E.coli</i>	8.9 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-8 (CXCL8) (72 a.a.)	AF-200-08M	<i>E.coli</i>	8.4 kDa	5µg	25µg	\$3,300

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-8 (CXCL8)	500-P28	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-8 (CXCL8)	500-P28BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*IL-8 continued on next page...*

## IL-8 (CXCL8) *Interleukin-8 (continued...)*

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-8 (CXCL8)	500-M08	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-8 (CXCL8)	ABTS CATALOG #	900-K18	PRICE: \$320
Human IL-8 (CXCL8)	TMB CATALOG #	900-T18	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-8 (CXCL8)	ABTS CATALOG #	900-M18	PRICE: \$100
Human IL-8 (CXCL8)	TMB CATALOG #	900-TM18	PRICE: \$100

## IL-9 *Interleukin-9*

**Synonyms:** p40 cytokine, T-cell growth factor p40

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-9	200-09	<i>E.coli</i>	14.0 kDa	2µg	10µg	\$5,200
Murine IL-9	219-19	<i>E.coli</i>	14.3 kDa	2µg	10µg	\$5,200
Rat IL-9	400-18	<i>E.coli</i>	14.3 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-9	AF-200-09	<i>E.coli</i>	14.0 kDa	2µg	10µg	\$5,700

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-9	500-P29	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-9	500-P29BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-9	500-P59	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-9	500-P59BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-9	ABTS CATALOG #	900-K20	PRICE: \$320
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## IL-10 *Interleukin-10*

**Synonyms:** B-TCGF, CSIF, TGIF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-10	200-10	<i>E.coli</i>	18.6 kDa	2µg	10µg	\$5,200
Murine IL-10	210-10	<i>E.coli</i>	18.7 kDa	2µg	10µg	\$5,200
Rat IL-10	400-19	<i>E.coli</i>	18.7 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-10	AF-200-10	<i>E.coli</i>	18.6 kDa	2µg	10µg	\$5,700
Murine IL-10	AF-210-10	<i>E.coli</i>	18.7 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-10	500-P20	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-10	500-P20BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-10	500-P60	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-10	500-P60BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Rat IL-10	500-P139	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat IL-10	500-P139BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-10	500-M86	<i>Mouse</i>	E, WB	500µg	\$150
Anti-Murine IL-10	500-M128	<i>Rat</i>	E, WB	500µg	\$150
Anti-Rat IL-10	500-M130	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-10	ABTS CATALOG # 900-K21	PRICE: \$320
Murine IL-10	ABTS CATALOG # 900-K53	PRICE: \$320
Murine IL-10	TMB CATALOG # 900-T53	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-10	ABTS CATALOG # 900-M21	PRICE: \$100
Murine IL-10	ABTS CATALOG # 900-M53	PRICE: \$100
Murine IL-10	TMB CATALOG # 900-TM53	PRICE: \$100

## IL-11 *Interleukin-11*

**Synonyms:** Adipogenesis Inhibitory Factor (AGIF)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-11	200-11	<i>E.coli</i>	19.3 kDa	2µg	10µg	\$5,200
Murine IL-11	220-11	<i>E.coli</i>	19.1 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-11	AF-200-11	<i>E.coli</i>	19.3 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-11	500-P01	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-11	500-P01BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-11	500-M11	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-11	ABTS CATALOG # 900-K22	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-11	ABTS CATALOG # 900-M22	PRICE: \$100
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## IL-12 *Interleukin-12*

**Synonyms:** NKSF, CTL Maturation Factor (TCMF), Cytotoxic Lymphocyte Maturation Factor (CLMF), TSF;

**p35:** Interleukin-12 subunit alpha, IL-12 subunit p35, IL-12A, Cytotoxic Lymphocyte Maturation Factor 35 kDa subunit (CLMF p35), NK cell stimulating Factor Chain 1; **p40:** Interleukin-12 subunit beta, IL-12 subunit p40, IL-12B, Cytotoxic Lymphocyte Maturation Factor 40 kDa subunit (CLMF p40), NK cell Stimulating Factor Chain 2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Murine IL-12 p40	210-12P40H	HEK293 cells	40.0 kDa	2µg	10µg	\$5,200
Human IL-12 p70	200-12	CHO cells	75.0 kDa	2µg	10µg	\$5,200
Human IL-12 p70	200-12H	HEK293 cells	75.0 kDa	2µg	10µg	\$5,200
Murine IL-12 p70	210-12	CHO cells	75.0 kDa	2µg	10µg	\$5,200
Human IL-12 p80	200-12P80H	Insect cells	80.0 kDa	2µg	10µg	\$7,800
Murine IL-12 p80	210-12P80H	HEK293cells	80.0 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

*IL-12 continued on next page...*



## IL-12 *Interleukin-12 (continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-12	500-P154G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-12	500-P154GBT	Goat	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-12	500-P155G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-12	500-P155GBT	Goat	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-12	500-M12	Mouse	E, WB	500µg	\$150
Anti-Murine IL-12	500-M59	Rat	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-12	ABTS CATALOG # 900-K96	PRICE: \$320
Human IL-12	TMB CATALOG # 900-T96	PRICE: \$320
Murine IL-12	ABTS CATALOG # 900-K97	PRICE: \$320
Murine IL-12	TMB CATALOG # 900-T97	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-12	ABTS CATALOG # 900-M96	PRICE: \$100
Human IL-12	TMB CATALOG # 900-TM96	PRICE: \$100
Murine IL-12	ABTS CATALOG # 900-M97	PRICE: \$100
Murine IL-12	TMB CATALOG # 900-TM97	PRICE: \$100

## IL-13 *Interleukin-13*

Synonyms: NC30 (Human), P600 (Murine)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-13	200-13	<i>E.coli</i>	12.6 kDa	2µg	10µg	\$5,200
Human IL-13 Variant	200-13A	<i>E.coli</i>	12.6 kDa	2µg	10µg	\$5,200
Murine IL-13	210-13	<i>E.coli</i>	12.3 kDa	2µg	10µg	\$5,200
Rat IL-13 (109 a.a.)	400-16	<i>E.coli</i>	11.9 kDa	2µg	10µg	\$5,200
Rat IL-13 (113 a.a.)	400-16L	<i>E.coli</i>	12.3 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-13	AF-200-13	<i>E.coli</i>	12.6 kDa	2µg	10µg	\$5,700

Additional sizes available please inquire

*IL-13 continued on next page...*

## IL-13 *Interleukin-13 (continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-13	500-P13	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-13	500-P13BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-13	500-P178	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-13	500-P178BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Rat IL-13	500-P224	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat IL-13	500-P224BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-13	ABTS CATALOG # 900-K23	PRICE: \$320
Murine IL-13	ABTS CATALOG # 900-K207	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-13	ABTS CATALOG # 900-M23	PRICE: \$100
Murine IL-13	ABTS CATALOG # 900-M207	PRICE: \$100

## IL-15 *Interleukin-15*

Synonyms: IL-T

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-15	200-15	<i>E.coli</i>	12.9 kDa	2µg	10µg	\$3,900
Murine IL-15	210-15	<i>E.coli</i>	13.3 kDa	2µg	10µg	\$3,900
Rat IL-15	400-24	<i>E.coli</i>	13.5 kDa	2µg	10µg	\$3,900

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-15	AF-200-15	<i>E.coli</i>	12.9 kDa	2µg	10µg	\$4,300

Additional sizes available please inquire

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human IL-15	GMP200-15-50µg	<i>E.coli</i>	12.9 kDa	50µg	\$775
PeproGMP® Human IL-15	GMP200-15-100µg	<i>E.coli</i>	12.9 kDa	100µg	\$1,450

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-15	500-P15	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-15	500-P15BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-15	500-P173	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-15	500-P173BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*IL-15 continued on next page...*

## IL-15 *Interleukin-15 (continued...)*

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IL-15	500-M15	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Murine IL-15	ABTS CATALOG #	900-K188	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Murine IL-15	ABTS CATALOG #	900-M188	PRICE: \$100
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## IL-16 *Interleukin-16*

**Synonyms:** LCF (Lymphocyte Chemoattractant Factor)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-16 (121 a.a.)	200-16A	<i>E.coli</i>	12.4 kDa	2µg	10µg	\$5,200
Human IL-16 (129 a.a.)	200-16	<i>E.coli</i>	13.3 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-16 (121 a.a.)	AF-200-16A	<i>E.coli</i>	12.4 kDa	2µg	10µg	\$5,700

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-16	500-P06	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-16	500-P06Bt	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## IL-17A *Interleukin-17A*

**Synonyms:** IL-17, CTLA-8

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-17A	200-17	<i>E.coli</i>	31.3 kDa	5µg	25µg	\$3,000
Murine IL-17A	210-17	<i>E.coli</i>	30.0 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-17A	AF-200-17	<i>E.coli</i>	31.3 kDa	5µg	25µg	\$3,300

Additional sizes available please inquire

*IL-17A continued on next page...*

## IL-17A *Interleukin-17A (Continued)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-17A	500-P07	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-17A	500-P07BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human IL-17A	500-P07G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-17A	500-P07GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-17A	500-P265	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-17A	500-P265BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-17A	ABTS CATALOG #	900-K84	PRICE: \$320
Murine IL-17A	ABTS CATALOG #	900-K392	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-17A	ABTS CATALOG #	900-M84	PRICE: \$100
Murine IL-17A	ABTS CATALOG #	900-M392	PRICE: \$100

## IL-17B *Interleukin-17B*

Synonyms: IL-20, NIRF, Cytokine ZCYTO7

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-17B	200-28	<i>E.coli</i>	36.6 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-17B	500-P248	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-17B	500-P248BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## IL-17D *Interleukin-17D*

Synonyms: none

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-17D	200-27	<i>E.coli</i>	40.5 kDa	5µg	25µg	\$3,000
Murine IL-17D	210-17D	<i>E.coli</i>	40.6 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

*IL-17D continued on next page...*

## IL-17D *Interleukin-17D (continued...)*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-17D	AF-200-27	<i>E.coli</i>	40.5 kDa	5µg	25µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-17D	500-P88	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-17D	500-P88BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## IL-17E *Interleukin-17E*

Synonyms: IL-25

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-17E	200-24	<i>E.coli</i>	33.8 kDa	5µg	25µg	\$3,000
Murine IL-17E	210-17E	<i>E.coli</i>	35.0 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-17E	AF-200-24	<i>E.coli</i>	33.8 kDa	5µg	25µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-17E	500-P89	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-17E	500-P89BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-17E	<b>ABTS CATALOG #</b> 900-K234	<b>PRICE:</b> \$320
Human IL-17E	<b>TMB CATALOG #</b> 900-T234	<b>PRICE:</b> \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-17E	<b>ABTS CATALOG #</b> 900-M234	<b>PRICE:</b> \$100
Human IL-17E	<b>TMB CATALOG #</b> 900-TM234	<b>PRICE:</b> \$100

## IL-17F *Interleukin-17F*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human IL-17F	200-25	<i>E.coli</i>	30.1 kDa	5µg	25µg	\$3,000
Murine IL-17F	210-17F	<i>E.coli</i>	30.0 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human IL-17F	AF-200-25	<i>E.coli</i>	30.1 kDa	5µg	25µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human IL-17F	500-P90	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-17F	500-P90BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-17F	ABTS CATALOG #	900-K277	PRICE: \$320
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## IL-18BP *Interleukin-18 Binding Protein*

**Synonyms:** IL-18BPα, Tadekinig-alfa

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human IL-18BP Fc	200-18BP	CHO cells	87.2 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Murine IL-18BP	500-P153G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-18BP	500-P153GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## IL-19 *Interleukin-19*

**Synonyms:** Melanoma differentiation-associated protein-like protein

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human IL-19	200-19	<i>E.coli</i>	35.8 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human IL-19	500-P189	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-19	500-P189BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## IL-20 *Interleukin-20*

**Synonyms:** Cytokine ZCYTO10

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-20	200-20	<i>E.coli</i>	35.2 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-20	500-P190G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-20	500-P190GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-20	ABTS CATALOG # 900-K224	PRICE: \$320
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## IL-21 *Interleukin-21*

**Synonyms:** Za11

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-21	200-21	<i>E.coli</i>	15.4 kDa	2µg	10µg	\$5,200
Murine IL-21	210-21	<i>E.coli</i>	15.0 kDa	2µg	10µg	\$5,200
Rat IL-21	400-41	<i>E.coli</i>	15.3 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-21	AF-200-21	<i>E.coli</i>	15.4 kDa	2µg	10µg	\$5,700
Murine IL-21	AF-210-21	<i>E.coli</i>	15.0 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human IL-21	GMP200-21-50µg	<i>E.coli</i>	15.4 kDa	50µg	\$1,200
PeproGMP® Human IL-21	GMP200-21-100µg	<i>E.coli</i>	15.4 kDa	100µg	\$2,000

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-21	500-P191	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-21	500-P191BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-21	500-P278	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-21	500-P278BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-21	ABTS CATALOG # 900-K226	PRICE: \$320
Murine IL-21	ABTS CATALOG # 900-K368	PRICE: \$320

*IL-21 continued on next page...*

## IL-21 *Interleukin-21 (continued...)*

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Murine IL-21	<b>ABTS CATALOG #</b> 900-M368	<b>PRICE:</b> \$100
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## IL-22 *Interleukin-22*

**Synonyms:** IL-TIF, Cytokine ZCYTO18

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-22	200-22	<i>E.coli</i>	33.6 kDa	2µg	10µg	\$5,200
Murine IL-22	210-22	<i>E.coli</i>	33.4 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-22	AF-200-22	<i>E.coli</i>	33.6 kDa	2µg	10µg	\$5,700
Murine IL-22	AF-210-22	<i>E.coli</i>	33.4 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-22	500-P211	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-22	500-P211BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine IL-22	500-P223	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IL-22	500-P223BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

**Key:** E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-22	<b>ABTS CATALOG #</b> 900-K246	<b>PRICE:</b> \$320
Murine IL-22	<b>ABTS CATALOG #</b> 900-K257	<b>PRICE:</b> \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-22	<b>ABTS CATALOG #</b> 900-M246	<b>PRICE:</b> \$100
Murine IL-22	<b>ABTS CATALOG #</b> 900-M257	<b>PRICE:</b> \$100

## IL-23 *Interleukin-23*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-23	200-23	Insect cells	53.5 kDa	2µg	10µg	\$9,800

*Additional sizes available please inquire*



## IL-24 *Interleukin-24*

**Synonyms:** MDA-7 (Melanoma Differentiation-Associated gene 7 protein)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-24	200-35	CHO cells	18.9 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

## IL-27 *Interleukin-27*

**Synonyms:** Interleukin-27 subunit alpha, IL-27-A, Interleukin-27 subunit beta, IL-27B, Epstein-Barr virus-induced gene 3 protein, EBV-induced gene 3 protein, EBI3, p28, Interleukin-30, IL-30

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-27	200-38	HEK293 cells	47.8 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## IL-31 *Interleukin-31*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-31	200-31	<i>E.coli</i>	15.8 kDa	2µg	10µg	\$5,200
Murine IL-31	210-31	<i>E.coli</i>	15.8 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-31	500-P249	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-31	500-P249BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-31	ABTS CATALOG # 900-K347	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-31	ABTS CATALOG # 900-M347	PRICE: \$100
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## IL-33 *Interleukin-33*

**Synonyms:** IL-1 F11, NF-HEV

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-33	200-33	<i>E.coli</i>	17.9 kDa	2µg	10µg	\$5,200
Murine IL-33	210-33	<i>E.coli</i>	17.5 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

*IL-33 continued on next page...*

## IL-33 *Interleukin-33 (continued...)*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human IL-33	AF-200-33	<i>E.coli</i>	17.9 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human IL-33	500-P261	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IL-33	500-P261BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

**Key:** E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IL-33	<b>ABTS CATALOG #</b> 900-K398	<b>PRICE:</b> \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IL-33	<b>ABTS CATALOG #</b> 900-M398	<b>PRICE:</b> \$100
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## IL-34 *Interleukin-34*

**Synonyms:** C16orf77

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human IL-34	200-34	HEK293 cells	52.5 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## IL-35 *Interleukin-35*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human IL-35	200-37	HEK293 cells	45.8 kDa	2µg	10µg	\$5,200

## IL-36α (IL-1F6) *Interleukin-36α*

**Synonyms:** IL36A, Interleukin-1 family member 6 (IL-1F6), FIL1ε (FIL1E), Interleukin-1ε (IL1E)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human IL-36α (IL-1F6)	200-36A	<i>E.coli</i>	17.2 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## IL-36 $\beta$ (IL-1F8) Interleukin-36 $\beta$

**Synonyms:** IL-1H2, IL-1 eta

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-36 $\beta$ (IL-1F8)	200-36B	<i>E.coli</i>	17.3 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

Additional sizes available please inquire

## IL-36 $\gamma$ (IL-1F9) Interleukin-36 $\gamma$

**Synonyms:** IL-1 $\epsilon$  (epsilon), IL-1H1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-36 $\gamma$ (IL-1F9)	200-36G	<i>E.coli</i>	17.0 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-36 $\gamma$ (IL-1F9)	AF-200-36G	<i>E.coli</i>	17.0 kDa	2 $\mu$ g	10 $\mu$ g	\$5,700

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IL-36 $\gamma$ (IL-1F9)	500-P316	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human IL-36 $\gamma$ (IL-1F9)	500-P316BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## IL-36RA Interleukin-36 Receptor Antagonist

**Synonyms:** Interleukin-36RA, FIL1 delta, IL-1F5, IL-1HY1, IL-1L1, IL-1RP3, IL-1ra Homolog 1, IL-1 delta

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-36RA	200-36RA	<i>E.coli</i>	17.0 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000
Murine IL-36RA	210-36RA	<i>E.coli</i>	16.9 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000

Additional sizes available please inquire

## IL-37 Interleukin-37

**Synonyms:** IL-1F7, IL-1 $\zeta$  (zeta), IL-1H4

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IL-37 (IL-1F7)	200-39	<i>E.coli</i>	19.4 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human IL-37 (IL-1F7)	AF-200-39	<i>E.coli</i>	19.4 kDa	5 $\mu$ g	25 $\mu$ g	\$3,300

Additional sizes available please inquire

## INSL5/INSL7 Hybrid

**Synonyms:** none

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human INSL5/INSL7 Hybrid	130-05	<i>E.coli</i>	5.2 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

## IP-10 (CXCL10) *Gamma-Interferon Inducible Protein 10*

**Synonyms:** Crg-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human IP-10 (CXCL10)	300-12	<i>E.coli</i>	8.6 kDa	5µg	25µg	\$3,000
Murine IP-10 (CXCL10)	250-16	<i>E.coli</i>	8.7 kDa	5µg	25µg	\$3,000
Rat IP-10 (CXCL10)	400-33	<i>E.coli</i>	8.6 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human IP-10 (CXCL10)	500-P93	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human IP-10 (CXCL10)	500-P93BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine IP-10 (CXCL10)	500-P129	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine IP-10 (CXCL10)	500-P129BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Rat IP-10 (CXCL10)	500-P290	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat IP-10 (CXCL10)	500-P290BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human IP-10 (CXCL10)	500-M60	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human IP-10 (CXCL10)	<b>ABTS CATALOG #</b> 900-K39	<b>PRICE:</b> \$320
Human IP-10 (CXCL10)	<b>TMB CATALOG #</b> 900-T39	<b>PRICE:</b> \$320
Murine IP-10 (CXCL10)	<b>ABTS CATALOG #</b> 900-K153	<b>PRICE:</b> \$320
Rat IP-10 (CXCL10)	<b>ABTS CATALOG #</b> 900-K449	<b>PRICE:</b> \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human IP-10 (CXCL10)	<b>ABTS CATALOG #</b> 900-M39	<b>PRICE:</b> \$100
Human IP-10 (CXCL10)	<b>TMB CATALOG #</b> 900-TM39	<b>PRICE:</b> \$100
Murine IP-10 (CXCL10)	<b>ABTS CATALOG #</b> 900-M153	<b>PRICE:</b> \$100
Rat IP-10 (CXCL10)	<b>ABTS CATALOG #</b> 900-M449	<b>PRICE:</b> \$100

## Irisin

**Synonyms:** Fibronectin type III domain-containing protein 5 (FNDC5), Fibronectin type III repeat-containing protein 2 (FRCP2)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human/Murine/Rat Irisin	100-65	CHO cells	25.2 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

## I-TAC (CXCL11) *Interferon Inducible T-cell α Chemokine*

**Synonyms:** B-R1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human I-TAC (CXCL11)	300-46	<i>E.coli</i>	8.3 kDa	5µg	20µg	\$3,000
Murine I-TAC (CXCL11)	250-29	<i>E.coli</i>	9.0 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human I-TAC (CXCL11)	AF-300-46	<i>E.coli</i>	8.3 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human I-TAC (CXCL11)	500-P132	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human I-TAC (CXCL11)	500-P132BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human I-TAC (CXCL11)	ABTS CATALOG # 900-K151	PRICE: \$320
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## Kex-2

**Synonyms:** Endoproteinase Lys/Arg-Arg

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Yeast Kex-2	450-45	Insect cells	60.4 kDa	50µg	250µg	\$600

Additional sizes available please inquire

I-K

## KGF (FGF-7) *Keratinocyte Growth Factor*

**Synonyms:** Fibroblast Growth Factor-7 (FGF-7), HBGF-7

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human KGF (FGF-7)	100-19	<i>E.coli</i>	18.9 kDa	2µg	10µg	\$5,200
Murine KGF (FGF-7)	450-60	<i>E.coli</i>	18.8 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human KGF (FGF-7)	AF-100-19	<i>E.coli</i>	18.9 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® KGF	GMP100-19-50µg	<i>E.coli</i>	18.9 kDa	50µg	\$775
PeproGMP® KGF	GMP100-19-100µg	<i>E.coli</i>	18.9 kDa	100µg	\$1,450

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human KGF (FGF-7)	500-P19	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human KGF (FGF-7)	500-P19BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## KLF4-TAT *Kruppel-Like Factor-4*

**Synonyms:** EZF, GKLF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human KLF4-TAT	110-08	HEK293 cells	51.7 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## Klotho

**Synonyms:** αKlotho, KLA

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Klotho	100-53	CHO cells	58.6 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Klotho	500-P296	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Klotho	500-P296BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## LAG-1 (CCL4L1) *Lymphocyte Activation Gene-1*

**Synonyms:** ACT-2, T-cell Activation-2, HC21

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human LAG-1 (CCL4L1)	300-58	<i>E.coli</i>	7.7 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

## LD78β (CCL3L1)

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human LD78β (CCL3L1)	300-56	<i>E.coli</i>	7.7 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human LD78β (CCL3L1)	500-P187G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human LD78β (CCL3L1)	500-P187GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## LEC (CCL16) *Liver-Expressed Chemokine*

**Synonyms:** NCC-4, HCC-4, LMC, LCC-1, MTN-1, IL-10-inducible chemokine

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human LEC (CCL16)	300-44	<i>E.coli</i>	11.2 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human LEC (CCL16)	500-P125G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human LEC (CCL16)	500-P125GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human LEC (CCL16)	500-M43	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

## Leptin

**Synonyms:** Obesity protein (OB)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	5mg
				\$80	\$195	
Human Leptin	300-27	<i>E.coli</i>	16.0 kDa	200µg	1mg	\$500
Murine Leptin	450-31	<i>E.coli</i>	16.2 kDa	200µg	1mg	\$500
Rat Leptin	400-21	<i>E.coli</i>	16.2 kDa	200µg	1mg	\$500

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human Leptin	AF-300-27	<i>E.coli</i>	16.0 kDa	200µg	1mg	\$215
Murine Leptin	AF-450-31	<i>E.coli</i>	16.2 kDa	200µg	1mg	\$215

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Leptin	500-P86	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Leptin	500-P86BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine Leptin	500-P68	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine Leptin	500-P68BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Rat Leptin	500-P185G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat Leptin	500-P185GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

**Key:** E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human Leptin	500-M27	<i>Mouse</i>	E, WB	500µg	\$150

**Key:** E = ELISA, WB = Western blot

### ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human Leptin	<b>ABTS CATALOG #</b> 900-K90	<b>PRICE:</b> \$320
Murine Leptin	<b>ABTS CATALOG #</b> 900-K76	<b>PRICE:</b> \$320

## Leptin Receptor

**Synonyms:** LEP-R, HuB219, Obesity protein (OB) Receptor, OB-R

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Leptin Receptor	300-27R	CHO cells	93.5 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*



## LIF *Leukemia Inhibitory Factor*

**Synonyms:** Differentiation-stimulating factor, D factor, Melanoma-derived LPL inhibitor (MLPLI), Interleukin 6 family cytokine

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human LIF	300-05	<i>E.coli</i>	19.7 kDa	5µg	25µg	\$2,800
Murine LIF	250-02	<i>E.coli</i>	19.9 kDa	5µg	25µg	\$2,800

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human LIF	AF-300-05	<i>E.coli</i>	19.6 kDa	5µg	25µg	\$3,100
Murine LIF	AF-250-02	<i>E.coli</i>	19.9 kDa	5µg	25µg	\$3,100

Additional sizes available please inquire

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human LIF	GMP300-05-50µg	<i>E.coli</i>	19.7 kDa	50µg	\$775
PeproGMP® Human LIF	GMP300-05-100µg	<i>E.coli</i>	19.7 kDa	100µg	\$1,450

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human LIF	500-P39	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human LIF	500-P39BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## LIGHT

**Synonyms:** TNFSF14, HVEM-L, CD258

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human LIGHT	310-09B	Insect cells	19.3 kDa	3µg	15µg	N/A
Murine LIGHT	315-12	<i>E.coli</i>	20.1 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Murine LIGHT	AF-315-12	<i>E.coli</i>	20.1 kDa	5µg	20µg	\$3,300

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human LIGHT	500-P179	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human LIGHT	500-P179BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine LIGHT	500-P308	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine LIGHT	500-P308BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Lin28-TAT

**Synonyms:** CSDD1, LIN28A, ZCCHC1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Lin28-TAT	110-06	<i>E.coli</i>	24.4 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

## Lymphotactin (XCL1)

**Synonyms:** XCL-1, SCM-1a, ATAC

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Lymphotactin (XCL1)	300-20	<i>E.coli</i>	10.0 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Lymphotactin	500-P40	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Lymphotactin	500-P40BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## MANF *Mesencephalic Astrocyte-derived Neurotrophic Factor*

**Synonyms:** ARMET, Arginine-Rich Protein (ARP)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MANF	450-06	<i>E.coli</i>	18.1 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

## Maspin

**Synonyms:** SerpinB5, Protease inhibitor 5

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Maspin	130-12	<i>E.coli</i>	42.1 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Maspin	500-P270	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Maspin	500-P270BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## MCPs *Monocyte Chemotactic Proteins 1-5*

**Synonyms:** MCP-1: MCAF, JE (murine); MCP-2: HC14; MCP-3: MARC; MCP-4: NCC-1; MCP-5: None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MCP-1 (CCL2)	300-04	<i>E.coli</i>	8.6 kDa	5µg	20µg	\$3,000
Murine JE/MCP-1 (CCL2)	250-10	<i>E.coli</i>	13.8 kDa	2µg	10µg	\$3,000
Rat MCP-1 (CCL2)	400-12	<i>E.coli</i>	14.0 kDa	2µg	10µg	\$3,000
Human MCP-2 (CCL8)	300-15	<i>E.coli</i>	8.9 kDa	2µg	10µg	\$3,000
Murine MCP-2 (CCL8)	250-14	<i>E.coli</i>	8.5 kDa	5µg	20µg	\$3,000
Human MCP-3 (CCL7)	300-17	<i>E.coli</i>	9.0 kDa	2µg	10µg	\$3,000
Murine MCP-3 (CCL7)	250-08	<i>E.coli</i>	8.5 kDa	2µg	10µg	\$3,000
Human MCP-4 (CCL13)	300-24	<i>E.coli</i>	8.6 kDa	5µg	20µg	\$3,000
Murine MCP-5 (CCL12)	250-04	<i>E.coli</i>	9.3 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human MCP-1 (CCL2)	AF-300-04	<i>E.coli</i>	8.6 kDa	5µg	20µg	\$3,300
Murine MCP-2 (CCL8)	AF-300-15	<i>E.coli</i>	8.9 kDa	2µg	10µg	\$3,300

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MCP-1 (CCL2)	500-P34	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MCP-1 (CCL2)	500-P34BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine JE/MCP-1 (CCL2)	500-P113	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine JE/MCP-1 (CCL2)	500-P113BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Rat MCP-1 (CCL2)	500-P76	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat MCP-1 (CCL2)	500-P76BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human MCP-2 (CCL8)	500-P35	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MCP-2 (CCL8)	500-P35BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine MCP-2 (CCL8)	500-P127	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine MCP-2 (CCL8)	500-P127BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human MCP-3 (CCL7)	500-P37G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MCP-3 (CCL7)	500-P37GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine MCP-3 (CCL7)	500-P116G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine MCP-3 (CCL7)	500-P116GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Human MCP-4 (CCL13)	500-P04	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MCP-4 (CCL13)	500-P04BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human MCP-4 (CCL13)	500-P04G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MCP-4 (CCL13)	500-P04GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine MCP-5 (CCL12)	500-P61	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine MCP-5 (CCL12)	500-P61BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*MCP's continued on next page...*

## MCPs *Monocyte Chemotactic Proteins 1-5 (continued...)*

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human MCP-1 (CCL2)	500-M71	Mouse	E, WB	500µg	\$150
Anti-Human MCP-2 (CCL8)	500-M69	Mouse	E, WB	500µg	\$150
Anti-Human MCP-3 (CCL7)	500-M73	Mouse	E, WB	500µg	\$150
Anti-Human MCP-4 (CCL13)	500-M70	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human MCP-1 (CCL2)	ABTS CATALOG #	900-K31	PRICE: \$320
Human MCP-1 (CCL2)	TMB CATALOG #	900-T31	PRICE: \$320
Murine JE/MCP-1 (CCL2)	ABTS CATALOG #	900-K126	PRICE: \$320
Rat MCP-1 (CCL2)	ABTS CATALOG #	900-K59	PRICE: \$320
Human MCP-2 (CCL8)	ABTS CATALOG #	900-K41	PRICE: \$320
Murine MCP-3 (CCL7)	ABTS CATALOG #	900-K123	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human MCP-1 (CCL2)	ABTS CATALOG #	900-M31	PRICE: \$100
Human MCP-1 (CCL2)	TMB CATALOG #	900-TM31	PRICE: \$100
Murine JE/MCP-1 (CCL2)	ABTS CATALOG #	900-M126	PRICE: \$100
Rat MCP-1 (CCL2)	ABTS CATALOG #	900-M59	PRICE: \$100
Human MCP-2 (CCL8)	ABTS CATALOG #	900-M41	PRICE: \$100

## M-CSF *Macrophage Colony Stimulating Factor*

Synonyms: CSF-1, MGI-IM

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human M-CSF	300-25	<i>E.coli</i>	36.8 kDa	2µg	10µg	\$4,300
Murine M-CSF	315-02	<i>E.coli</i>	36.4 kDa	2µg	10µg	\$4,300
Rat M-CSF	400-28	<i>E.coli</i>	36.2 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human M-CSF	AF-300-25	<i>E.coli</i>	36.8 kDa	2µg	10µg	\$4,700
Murine M-CSF	AF-315-02	<i>E.coli</i>	36.4 kDa	2µg	10µg	\$4,700
Rat M-CSF	AF-400-28	<i>E.coli</i>	36.2 kDa	2µg	10µg	\$5,700

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human M-CSF	500-P44	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human M-CSF	500-P44BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Murine M-CSF	500-P62G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine M-CSF	500-P62GBT	Goat	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*M-CSF continued on next page...*

## M-CSF *Macrophage Colony Stimulating Factor (continued...)*

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Murine M-CSF	<b>ABTS CATALOG #</b> 900-K245	<b>PRICE:</b> \$320
Murine M-CSF	<b>ABTS CATALOG #</b> 900-M245	<b>PRICE:</b> \$100

## MD-2/LY96 *Myeloid differentiation protein-2, Lymphocyte antigen 96*

**Synonyms:** ESPO-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MD-2/LY96	160-07	HEK293 Cells	17.2 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## MDC (CCL22) *Macrophage-Derived Chemokine*

**Synonyms:** STCP-1, ABCD-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MDC (CCL22) (67 a.a.)	300-36	<i>E.coli</i>	8.0 kDa	5µg	20µg	\$3,000
Human MDC (CCL22) (69 a.a.)	300-36A	<i>E.coli</i>	8.1 kDa	5µg	20µg	\$3,000
Murine MDC (CCL22)	250-23	<i>E.coli</i>	7.8 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MDC (CCL22)	500-P107	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MDC (CCL22)	500-P107BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine MDC (CCL22)	500-P176	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine MDC (CCL22)	500-P176BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human MDC (CCL22)	500-M41	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Murine MDC (CCL22)	<b>ABTS CATALOG #</b> 900-K197	<b>PRICE:</b> \$320
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## MEC (CCL28) *Mucosae-associated Epithelial Chemokine*

**Synonyms:** CCK-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MEC (CCL28)	300-57	<i>E.coli</i>	12.3 kDa	5µg	20µg	\$3,000
Murine MEC (CCL28)	250-30	<i>E.coli</i>	12.6 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MEC (CCL28)	500-P297	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MEC (CCL28)	500-P297BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Mesothelin

**Synonyms:** MPF, MSLN, SMRP, CAK1 antigen, ERC, Pre-pro-megakaryocyte-potentiating factor

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Mesothelin	100-63	CHO cells	36.4 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## MIA *Melanoma Inhibitory Activity*

**Synonyms:** Cartilage-Derived Retinoic Acid-sensitive Protein (CD-RAP)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MIA	130-01	<i>E.coli</i>	12.2 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MIA	500-P243	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MIA	500-P243BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## MIA-2 *Melanoma Inhibitory Activity-2*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MIA-2	130-02	<i>E.coli</i>	11.5 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MIA-2	500-P255	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MIA-2	500-P255BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human MIA-2	ABTS CATALOG # 900-K357	PRICE: \$320
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## Midkine

**Synonyms:** MK, NRG-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Midkine	450-16	<i>E.coli</i>	13.4 kDa	5µg	20µg	\$3,000
Murine Midkine	315-25	<i>E.coli</i>	13.3 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Midkine	500-P171	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Midkine	500-P171BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human Midkine	ABTS CATALOG # 900-K190	PRICE: \$320
Human Midkine	ABTS CATALOG # 900-M190	PRICE: \$100

## MIF *Macrophage Migration Inhibitory Factor*

**Synonyms:** GLIF, MMIF, GIF, Glycosylation-Inhibiting Factor

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MIF	300-69	Insect cells	15.0 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## MIG (CXCL9) *Monokine Induced by Interferon- $\gamma$*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MIG (CXCL9)	300-26	<i>E.coli</i>	11.7 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Murine MIG (CXCL9)	250-18	<i>E.coli</i>	12.2 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MIG (CXCL9)	500-P50	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human MIG (CXCL9)	500-P50BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human MIG (CXCL9)	500-M42	<i>Mouse</i>	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human MIG (CXCL9)	ABTS CATALOG # 900-K87	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human MIG (CXCL9)	ABTS CATALOG # 900-M87	PRICE: \$100
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## MIP-1 $\alpha$ (CCL3), $\beta$ (CCL4), $\gamma$ (CCL9/10) *Macrophage Inflammatory Proteins-1 $\alpha$ , -1 $\beta$ , -1 $\gamma$*

**Synonyms:** MIP-1 $\alpha$ : LD78 $\alpha$ ; MIP-1 $\beta$ : ACT-2; MIP-1 $\gamma$ : MRP2, CCF18

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MIP-1 $\alpha$ (CCL3)	300-08	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Murine MIP-1 $\alpha$ (CCL3)	250-09	<i>E.coli</i>	7.8 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Rat MIP-1 $\alpha$ (CCL3)	400-15	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Human MIP-1 $\beta$ (CCL4)	300-09	<i>E.coli</i>	7.6 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Murine MIP-1 $\beta$ (CCL4)	250-32	<i>E.coli</i>	7.8 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Rat MIP-1 $\beta$ (CCL4)	400-09	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Murine MIP-1 $\gamma$ (CCL9/10)	250-12	<i>E.coli</i>	11.6 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human MIP-1 $\alpha$ (CCL3)	AF-300-08	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,300

*Additional sizes available please inquire*

*MIP-1 $\alpha$ , - $\beta$ , - $\gamma$  continued on next page...*



## MIP-1 $\alpha$ (CCL3), $\beta$ (CCL4), $\gamma$ (CCL9/10) *Macrophage Inflammatory Proteins-1 $\alpha$ , -1 $\beta$ , -1 $\gamma$*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MIP-1 $\alpha$ (CCL3)	500-P38	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human MIP-1 $\alpha$ (CCL3)	500-P38BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine MIP-1 $\alpha$ (CCL3)	500-P121	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine MIP-1 $\alpha$ (CCL3)	500-P121BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat MIP-1 $\alpha$ (CCL3)	500-P77	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat MIP-1 $\alpha$ (CCL3)	500-P77BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Human MIP-1 $\beta$ (CCL4)	500-P38B	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human MIP-1 $\beta$ (CCL4)	500-P38BBT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine MIP-1 $\beta$ (CCL4)	500-P213	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine MIP-1 $\beta$ (CCL4)	500-P213BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine MIP-1 $\gamma$ (CCL9/10)	500-P117	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine MIP-1 $\gamma$ (CCL9/10)	500-P117BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human MIP-1 $\alpha$ (CCL3)	500-M74	Mouse	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human MIP-1 $\alpha$ (CCL3)	ABTS CATALOG # 900-K35	PRICE: \$320
Murine MIP-1 $\alpha$ (CCL3)	ABTS CATALOG # 900-K125	PRICE: \$320
Rat MIP-1 $\alpha$ (CCL3)	ABTS CATALOG # 900-K75	PRICE: \$320
Human MIP-1 $\beta$ (CCL4)	TMB CATALOG # 900-T36	PRICE: \$320
Murine MIP-1 $\beta$ (CCL4)	ABTS CATALOG # 900-K278	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human MIP-1 $\alpha$ (CCL3)	ABTS CATALOG # 900-M35	PRICE: \$100
Murine MIP-1 $\alpha$ (CCL3)	ABTS CATALOG # 900-M125	PRICE: \$100
Human MIP-1 $\beta$ (CCL4)	TMB CATALOG # 900-TM36	PRICE: \$100
Murine MIP-1 $\beta$ (CCL4)	ABTS CATALOG # 900-M278	PRICE: \$100

## MIP-3 (CCL23) *Macrophage Inflammatory Protein-3*

**Synonyms:** MPIF-1, Ck- $\beta$ 8

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MIP-3 (CCL23)	300-29	<i>E.coli</i>	11.3 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MIP-3 (CCL23)	500-P124	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human MIP-3 (CCL23)	500-P124BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## MIP-3 $\alpha$ (CCL20) *Macrophage Inflammatory Protein-3 $\alpha$*

**Synonyms:** LARC, Exodus-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MIP-3 $\alpha$ (CCL20)	300-29A	<i>E.coli</i>	8.0 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Murine MIP-3 $\alpha$ (CCL20)	250-27	<i>E.coli</i>	7.9 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MIP-3 $\alpha$ (CCL20)	500-P95A	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human MIP-3 $\alpha$ (CCL20)	500-P95ABT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human MIP-3 $\alpha$ (CCL20)	500-M28	<i>Mouse</i>	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

## MIP-3 $\beta$ (CCL19) *Macrophage Inflammatory Protein-3 $\beta$*

**Synonyms:** ELC, Exodus-3, SCYA19

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MIP-3 $\beta$ (CCL19)	300-29B	<i>E.coli</i>	8.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Murine MIP-3 $\beta$ (CCL19)	250-27B	<i>E.coli</i>	9.2 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MIP-3 $\beta$ (CCL19)	500-P95B	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human MIP-3 $\beta$ (CCL19)	500-P95BBT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human MIP-3 $\beta$ (CCL19)	500-M29	<i>Mouse</i>	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

## MIP-4 (CCL18) *Macrophage Inflammatory Protein-4*

**Synonyms:** PARC, DC-CK1, AMAC-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human MIP-4 (CCL18)	300-34	<i>E.coli</i>	7.8 kDa	2µg	10µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human MIP-4 (CCL18)	500-P108	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MIP-4 (CCL18)	500-P108BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## MIP-5 (CCL15) *Macrophage Inflammatory Protein-5*

**Synonyms:** HCC-2, Lkn-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human MIP-5 (CCL15)	300-43	<i>E.coli</i>	10.1 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human MIP-5 (CCL15)	500-P123G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MIP-5 (CCL15)	500-P123GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## MMP-1 *Matrix Metalloproteinase-1*

**Synonyms:** Fibroblast Collagenase, Interstitial Collagenase

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human MMP-1	420-01	<i>E.coli</i>	42.7 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## MMP-2 *Matrix Metalloproteinase-2*

**Synonyms:** Gelatinase A, TBE-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human MMP-2	420-02	<i>E.coli</i>	62.0 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## MMP-3 *Matrix Metalloproteinase-3*

**Synonyms:** Stromelysin-1, SL-1, Transin-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MMP-3	420-03	<i>E.coli</i>	42.8 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human MMP-3	500-P324	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human MMP-3	500-P324BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## MPF

**Synonyms:** Mesothelin, MSLN, SMRP, CAK1 antigen, Pre-pro-megakaryocyte-potentiating factor

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human MPF	100-62	CHO cells	26.7 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## Myostatin

**Synonyms:** GDF-8

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human/Murine/Rat Myostatin	120-00	<i>E.coli</i>	25.0 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## Myostatin-Propeptide

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Myostatin-Propeptide	120-12	<i>E.coli</i>	27.8 kDa	5µg	25µg	\$5,200

*Additional sizes available please inquire*

## Nanog

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Nanog	120-21	<i>E.coli</i>	34.7 kDa	5µg	20µg	\$3,900
Human Nanog-TAT	120-21B	<i>E.coli</i>	36.1 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

*Nanog continued on next page...*

## Nanog *(continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Nanog	500-P236	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Nanog	500-P236BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## NAP-2 (CXCL7) *Neutrophil Activating Protein-2*

**Synonyms:** PBP (parent molecule), CTAP-III (precursor)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human NAP-2 (CXCL7)	300-14	<i>E.coli</i>	7.6 kDa	2µg	10µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human NAP-2 (CXCL7)	500-P03	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human NAP-2 (CXCL7)	500-P03BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Human NAP-2 (CXCL7)	500-P03G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human NAP-2 (CXCL7)	500-P03GBT	Goat	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human NAP-2 (CXCL7)	500-M33	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human NAP-2 (CXCL7)	ABTS CATALOG # 900-K40	PRICE: \$320
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## Nesfatin-1

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Nesfatin-1	300-67	<i>E.coli</i>	9.7 kDa	20µg	100µg	\$1,100

Additional sizes available please inquire

## Neuritin

**Synonyms:** CPG15, NRN1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human/Rat Neuritin	450-36D	<i>E.coli</i>	19.4 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

## Neuropoietin

**Synonyms:** NPO, NP

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Murine Neuropoietin	250-25B	<i>E.coli</i>	19.8 kDa	5µg	25µg	\$3,900

*Additional sizes available please inquire*

## Neuroserpin

**Synonyms:** Serpin I1, Protease inhibitor 12

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Neuroserpin	130-14	<i>E.coli</i>	44.8 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Neuroserpin	500-P271	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Neuroserpin	500-P271BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human Neuroserpin	ABTS CATALOG # 900-K412	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human Neuroserpin	ABTS CATALOG # 900-M412	PRICE: \$100
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## Neurturin

**Synonyms:** NTN, NRTN

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Neurturin	450-11	<i>E.coli</i>	23.6 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Neurturin	500-P102	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Neurturin	500-P102BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

**$\beta$ -NGF** *beta-Nerve Growth Factor***Synonyms:** NGF- $\beta$ **RUO Cytokines**

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human $\beta$ -NGF	450-01	<i>E.coli</i>	27.0 kDa	20 $\mu$ g	100 $\mu$ g	\$1,100
Murine $\beta$ -NGF	450-34	<i>E.coli</i>	26.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

Additional sizes available please inquire

**Animal-Free Cytokines**

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human $\beta$ -NGF	AF-450-01	<i>E.coli</i>	27.0 kDa	20 $\mu$ g	100 $\mu$ g	\$1,200

Additional sizes available please inquire

**Polyclonal Antibodies** - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human $\beta$ -NGF	500-P85	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human $\beta$ -NGF	500-P85BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

**Monoclonal Antibodies**

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human $\beta$ -NGF	500-M85	<i>Mouse</i>	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

**Standard ELISA Development Kits**

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human $\beta$ -NGF	ABTS CATALOG #	900-K60	PRICE: \$320
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**Mini ELISA Development Kits**

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human $\beta$ -NGF	ABTS CATALOG #	900-M60	PRICE: \$100
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**NNT-1/BCSF-3** *Novel Neurotrophin-1/B-Cell-Stimulating Factor-3***Synonyms:** Cardiotrophin-like cytokine, Cardiotrophin-like cytokine factor 1 (CLCF1)**RUO Cytokines**

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human NNT-1/BCSF-3	450-18	<i>E.coli</i>	22.4 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

Additional sizes available please inquire

**Polyclonal Antibodies** - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-human NNT-1/BCSF-3	500-P186	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-human NNT-1/BCSF-3	500-P186BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Noggin

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Noggin	120-10C	HEK293 cells	46.0 kDa	5µg	20µg	\$3,900
Murine Noggin	250-38	<i>E.coli</i>	46.4 kDa	5µg	20µg	\$3,900

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Murine Noggin	AF-250-38	<i>E.coli</i>	46.4 kDa	5µg	20µg	\$4,300

Additional sizes available please inquire

## NOV *Nephroblastoma Overexpressed gene*

**Synonyms:** CCN3, IGFBP9, NovH

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human NOV	120-26	<i>E.coli</i>	36.2 kDa	5µg	20µg	\$3,900

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human NOV	500-P257	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human NOV	500-P257BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human NOV	ABTS CATALOG #	900-K338	PRICE: \$320
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## NP-1 *Neutrophil Peptide-1*

**Synonyms:** alpha Defensin-1, HNP-1, Cryptdin

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human NP-1	300-42	<i>E.coli</i>	3.4 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human NP-1	500-P126G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human NP-1	500-P126GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot



## NT-3 *Neurotrophin-3*

**Synonyms:** Neurotrophic Factor, Nerve Growth Factor-2 (NGF-2), HGNF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human NT-3	450-03	<i>E.coli</i>	27.2 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human NT-3	AF-450-03	<i>E.coli</i>	27.2 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human NT-3	500-P82	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human NT-3	500-P82BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human NT-3	500-P82G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human NT-3	500-P82GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## NT-4 *Neurotrophin-4*

**Synonyms:** Neurotrophin 4/5 (NT-4/NT-5)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human NT-4	450-04	<i>E.coli</i>	28.1 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human NT-4	AF-450-04	<i>E.coli</i>	28.1 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human NT-4	500-P83G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human NT-4	500-P83GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human NT-4	500-M24	<i>Mouse</i>	E	500µg	\$150

Key: E = ELISA, WB = Western blot

## Oncostatin M

**Synonyms:** OSM

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Oncostatin M (196 a.a.)	300-10H	HEK293 cells	22.2 kDa	2µg	10µg	\$5,200
Human Oncostatin M (227 a.a.)	300-10	<i>E.coli</i>	25.7 kDa	2µg	10µg	\$5,200
Human Oncostatin M (209 a.a.)	300-10T	<i>E.coli</i>	23.6 kDa	2µg	10µg	\$5,200
Rat Oncostatin M	400-36	<i>E.coli</i>	24.4 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human Oncostatin M (209 a.a.)	AF-300-10T	<i>E.coli</i>	23.6 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Oncostatin M	500-P30	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Oncostatin M	500-P30BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## OPG *Osteoprotegerin*

**Synonyms:** TNFRSF11B, OCIF (Osteoclastogenesis Inhibitory Factor), TR1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human OPG	450-14	<i>E.coli</i>	20.0 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies- Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human OPG	500-P149	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human OPG	500-P149BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Osteopontin

**Synonyms:** Bone sialoprotein 1, Secreted phosphoprotein 1, SPP-1, Nephropontin, Uropontin

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Osteopontin	120-35	HEK293 cells	33.7 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Osteopontin	500-P314	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Osteopontin	500-P314BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## OTOR

**Synonyms:** Otoraplin, MIAL (Melanoma Inhibitory Activity-like Protein)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human OTOR	130-03	<i>E.coli</i>	12.7 kDa	5µg	20µg	\$3,900

Additional sizes available please inquire

## sOX40 Ligand

**Synonyms:** OX40L, Glycoprotein Gp34, CD252, TXGP1, TNFSF4

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sOX40 Ligand	310-28	Insect cells	15.4 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

## p16-INK4a

**Synonyms:** Cyclin-Dependent Kinase Inhibitor 2A, Cyclin-Dependent Kinase 4 Inhibitor A, CDK4I, p16INK4A, Multiple Tumor Suppressor 1, MTS-1, p16-INK4

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human p16-INK4a	110-02	<i>E.coli</i>	16.5 kDa	5µg	20µg	\$3,900
Human p16-INK4a-TAT	110-02T	<i>E.coli</i>	18.0 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human p16-INK4a-TAT	500-P284T	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human p16-INK4a-TAT	500-P284TBT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## PAF-AH

**Synonyms:** PAF acetylhydrolase, PAF 2-acylhydrolase, LDL-associated Phospholipase A2, LDL-PLA(2), 2-acetyl-1-alkylglycerophosphocholine esterase, 1-alkyl-2-acetyl-glycerophosphocholine esterase

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PAF-AH	140-10	HEK293 cells	47.8 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

O-P

## PAI-1 *Plasminogen Activator Inhibitor-1*

**Synonyms:** Serpin E1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PAI-1	140-04	<i>E.coli</i>	42.7 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human PAI-1	500-P260	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human PAI-1	500-P260BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

**Key:** E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human PAI-1	<b>ABTS CATALOG #</b> 900-K383	<b>PRICE:</b> \$320
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## PAI-2 *Plasminogen Activator Inhibitor-2*

**Synonyms:** Serpin B2, Urokinase Inhibitor, Monocyte Arg-serpin

### Recombinant Proteins

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PAI-2	140-06	<i>E.coli</i>	46.5 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## PD-1 *Plasminogen Activator Inhibitor-2*

**Synonyms:** Programmed cell death protein 1 (PDCD1), CD279, SLEB2, hSLE1

### Recombinant Proteins

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PD-1 Fc	310-40	CHO cells	55.3 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## PDGF-AA, -AB, -BB, -CC *Platelet-Derived Growth Factor*

**Synonyms:** **PDGF-AA:** Platelet-Derived Growth Factor-AA, Glioma-Derived Growth Factor (GDGF), Osteosarcoma-Derived Growth Factor (ODGF); **PDGF-AB:** Platelet-Derived Growth Factor-AB, Glioma-Derived Growth Factor (GDGF), Osteosarcoma-Derived Growth Factor (ODGF), PCGF; **PDGF-BB:** Platelet-Derived Growth Factor-BB, Glioma-Derived Growth Factor (GDGF), Osteosarcoma-Derived Growth Factor (ODGF); **PDGF-CC:** Platelet-Derived Growth Factor-CC, Spinal Cord-Derived Growth Factor (SCDGF), Fallotein

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PDGF-AA	100-13A	<i>E.coli</i>	28.5 kDa	2µg	10µg	\$3,900
Murine PDGF-AA	315-17	<i>E.coli</i>	28.7 kDa	2µg	10µg	\$3,900
Human PDGF-AB	100-00AB	<i>E.coli</i>	26.4 kDa	2µg	10µg	\$3,900
Human PDGF-BB	100-14B	<i>E.coli</i>	24.3 kDa	2µg	10µg	\$3,900
Murine PDGF-BB	315-18	<i>E.coli</i>	24.4 kDa	2µg	10µg	\$3,900
Human PDGF-CC	100-00CC	<i>E.coli</i>	25.0 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human PDGF-AA	AF-100-13A	<i>E.coli</i>	28.5 kDa	2µg	10µg	\$4,300
Human PDGF-BB	AF-100-14B	<i>E.coli</i>	24.3 kDa	2µg	10µg	\$4,300

Additional sizes available please inquire

### PeptoGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeptoGMP® PDGF-AA	GMP100-13A-50µg	<i>E.coli</i>	28.5 kDa	50µg	\$600
PeptoGMP® PDGF-AA	GMP100-13A-100µg	<i>E.coli</i>	28.5 kDa	100µg	\$1,000

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human PDGF-AA	500-P46	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human PDGF-AA	500-P46BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human PDGF-BB	500-P47	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human PDGF-BB	500-P47BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human PDGF-BB	ABTS CATALOG # 900-K04	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human PDGF-BB	ABTS CATALOG # 900-M04	PRICE: \$100
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## PD-L1 Fc *Programmed Death Ligand 1*

**Synonyms:** Programmed cell death 1 Ligand 1 (PDCD1L1), PD-1, B7-H1 (B7 homolog 1), CD274, SLEB2, SLE1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PD-L1 Fc	310-35	CHO cells	102.6 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human PD-L1 Fc	500-P321	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human PD-L1 Fc	500-P321BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## PD-L2 Fc *Programmed Death Ligand 2*

**Synonyms:** Programmed cell death 1 ligand 2 (PDCD1 ligand 2), PD-1 ligand 2, Butyrophilin B7-DC, CD273, PDCD1LG2, PDCD1L2, PDLB7DC

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PD-L2 Fc	310-38	CHO cells	97.2 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

## PECAM-1 *Platelet Endothelial Cell Adhesion Molecule*

**Synonyms:** CD31 antigen, EndoCAM

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PECAM-1	150-06	HEK293 cells	64.3 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## PEDF *Pigment Epithelium-Derived Factor*

**Synonyms:** SerpinF1, EPC-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PEDF	130-13	<i>E.coli</i>	44.5 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

## Persephin

**Synonyms:** PSP, PSPN

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Persephin	450-12	<i>E.coli</i>	20.8 kDa	5µg	20µg	\$3,000
Murine Persephin	450-35	<i>E.coli</i>	20.6 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

*Persephin continued on next page...*

## Persephin *(continued...)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Persephin	500-P138	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Persephin	500-P138BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## PF-4 (CXCL4) *Platelet Factor-4*

**Synonyms:** Oncostatin A, Ironplact

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PF-4 (CXCL4)	300-16	<i>E.coli</i>	7.8 kDa	5µg	20µg	\$3,000
Murine PF-4 (CXCL4)	250-39	<i>E.coli</i>	8.2 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human PF-4 (CXCL4)	500-P05	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human PF-4 (CXCL4)	500-P05BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Pleiotrophin

**Synonyms:** PTN, Heparin Affin Regulatory Protein (HARP), Heparin-Binding Growth Factor-8 (HBGF-8), Osteoblast-Specific Factor 1 (OSF-1)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Pleiotrophin	450-15	<i>E.coli</i>	15.4 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

## PlGF-1 *Placenta Growth Factor-1*

**Synonyms:** PGF, PlGF, PGFL

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PlGF-1	100-06	<i>E.coli</i>	29.7 kDa	5µg	25µg	\$3,000
Rat PlGF-1	400-39	<i>E.coli</i>	30.3 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human PlGF-1	AF-100-06	<i>E.coli</i>	29.7 kDa	5µg	25µg	\$3,300

Additional sizes available please inquire

*PlGF-1 continued on next page...*

## PIGF-1 *Placenta Growth Factor-1*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human PlGF-1	500-P226	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human PlGF-1	500-P226BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human PlGF-1	ABTS CATALOG #	900-K307	PRICE: \$320
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## PIGF-2 *Placenta Growth Factor-2*

Synonyms: PGFL

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PlGF-2	100-56A	<i>E.coli</i>	34.6 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

## PIGF-3 *Placenta Growth Factor-3*

Synonyms: PGFL

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human PlGF-3	100-57	<i>E.coli</i>	45.7 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

## Prokineticin-2

Synonyms: PROK2, PK2, Protein Bv8 homolog

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Prokineticin-2	100-46	<i>E.coli</i>	8.8 kDa	5µg	20µg	\$3,000
Murine Prokineticin-2	315-38	<i>E.coli</i>	11.6 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

## Prolactin

Synonyms: Mamotropin, Luterotropic hormone, Lutetropin

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Prolactin	100-07	<i>E.coli</i>	23.0 kDa	10µg	50µg	\$1,500
Murine Prolactin	315-16	<i>E.coli</i>	22.5 kDa	10µg	50µg	\$1,500
Rat Prolactin	400-27	<i>E.coli</i>	22.6 kDa	10µg	50µg	\$1,500

Additional sizes available please inquire



## PTHrP *Parathyroid Hormone-related Protein*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human PTHrP	100-09	<i>E.coli</i>	9.8 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human PTHrP	500-P276	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human PTHrP	500-P276BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated      Key: E = ELISA, WB = Western blot

## R-Spondin-1, -2 and -3 *Roof plate-specific Spondin-1, -2 and -3*

**Synonyms:** R-Spondin-1: RSPO1; R-Spondin-2: RSPO2; R-Spondin-3: RSPO3, PWTSR, THSD2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human R-Spondin-1	120-38	CHO cells	26.7 kDa	5µg	20µg	\$3,000
Murine R-Spondin-1	315-32	CHO cells	27.1 kDa	5µg	20µg	\$3,000
Human R-Spondin-2	120-43	CHO cells	24.4 kDa	5µg	20µg	\$3,000
Human R-Spondin-3	120-44	CHO cells	26.9 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

P-R

## sRANK Ligand *soluble Receptor Activator of NF-κB Ligand*

**Synonyms:** TNFSF11, TRANCE (TNF-Related Activation-induced Cytokine), OPGL (Osteoprotegerin Ligand), ODF (Osteoclast Differentiation Factor), CD254

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human sRANK Ligand	310-01	<i>E.coli</i>	20.0 kDa	2µg	10µg	\$5,200
Human sRANK Ligand	310-01C	CHO cells	22.1 kDa	2µg	10µg	\$5,200
Murine sRANK Ligand	315-11	<i>E.coli</i>	19.4 kDa	2µg	10µg	\$5,200
Murine sRANK Ligand	315-11C	CHO cells	19.8 kDa	2µg	10µg	\$5,200
Rat sRANK Ligand	400-30	<i>E.coli</i>	19.4 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human sRANK Ligand	AF-310-01	<i>E.coli</i>	20.0 kDa	2µg	10µg	\$5,700

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human sRANK Ligand	500-P133	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sRANK Ligand	500-P133BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human sRANK Ligand	500-P133G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sRANK Ligand	500-P133GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine sRANK Ligand	500-P63	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine sRANK Ligand	500-P63BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated      Key: E = ELISA, WB = Western blot

## sRANK Ligand *soluble Receptor Activator of NF- $\kappa$ B Ligand*

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human sRANK Ligand	500-M46	Mouse	E	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human sRANK Ligand	ABTS CATALOG #	900-K142	PRICE: \$320
Murine sRANK Ligand	ABTS CATALOG #	900-K233	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human sRANK Ligand	ABTS CATALOG #	900-M142	PRICE: \$100
Murine sRANK Ligand	ABTS CATALOG #	900-M233	PRICE: \$100

## sRANK Receptor *soluble RANK Receptor*

**Synonyms:** TNFRSF11A, TRANCE Receptor (TNF-Related Activation-induced Cytokine Receptor), ODAR (Osteoclast Differentiation and Activation Receptor), ODFR (Osteoclast Differentiation Factor Receptor), CD265

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sRANK Receptor	310-08	<i>E.coli</i>	19.3 kDa	20 $\mu$ g	100 $\mu$ g	\$1,100

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sRANK Receptor	500-P144	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human sRANK Receptor	500-P144BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## RANTES (CCL5) *Regulation upon Activation Normal T-cell Expressed Sequence*

**Synonyms:** SIS-delta

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human RANTES (CCL5)	300-06	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Murine RANTES (CCL5)	250-07	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000
Rat RANTES (CCL5)	400-13	<i>E.coli</i>	7.9 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human RANTES (CCL5)	AF-300-06	<i>E.coli</i>	7.8 kDa	5 $\mu$ g	20 $\mu$ g	\$3,300

Additional sizes available please inquire

*RANTES continued on next page...*

## RANTES *Regulation upon Activation Normal T-cell Expressed Sequence (continued)*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size		1mg
				\$195	\$250	
Anti-Human RANTES (CCL5)	500-P36	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human RANTES (CCL5)	500-P36BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Murine RANTES (CCL5)	500-P118	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine RANTES (CCL5)	500-P118BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Rat RANTES (CCL5)	500-P78	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat RANTES (CCL5)	500-P78BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human RANTES (CCL5)	500-M75	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human RANTES (CCL5)	ABTS CATALOG #	900-K33	PRICE: \$320
Murine RANTES (CCL5)	ABTS CATALOG #	900-K124	PRICE: \$320
Rat RANTES (CCL5)	ABTS CATALOG #	900-K72	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human RANTES (CCL5)	ABTS CATALOG #	900-M33	PRICE: \$100
Murine RANTES (CCL5)	ABTS CATALOG #	900-M124	PRICE: \$100
Rat RANTES (CCL5)	ABTS CATALOG #	900-M72	PRICE: \$100

## Relaxin-2

Synonyms: H2 relaxin, RLN2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size		1mg
				\$80	\$195	
Human Relaxin-2	130-15	<i>E.coli</i>	6.0 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

## Relaxin-3

Synonyms: H3 relaxin, Insulin-like peptide-7, INSL7

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size		1mg
				\$80	\$195	
Human Relaxin-3	130-10	<i>E.coli</i>	5.5 kDa	5µg	25µg	\$3,000

Additional sizes available please inquire

## RELM $\alpha$ *Resistin-like $\alpha$*

**Synonyms:** Cysteine-rich secreted protein FIZZ1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Murine RELM $\alpha$	450-26	<i>E.coli</i>	10.0 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Murine RELM $\alpha$	500-P214	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine RELM $\alpha$	500-P214BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## RELM $\beta$ *Resistin-like $\beta$*

**Synonyms:** Cysteine-rich secreted protein FIZZ2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human RELM $\beta$	450-22	<i>E.coli</i>	19.0 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000
Murine RELM $\beta$	450-26B	<i>E.coli</i>	18.0 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human RELM $\beta$	500-P217	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human RELM $\beta$	500-P217BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine RELM $\beta$	500-P215	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine RELM $\beta$	500-P215BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## RELM $\gamma$ *Resistin-like $\gamma$*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Murine RELM $\gamma$	450-26G	<i>E.coli</i>	9.2 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000

*Additional sizes available please inquire*

## Resistin

**Synonyms:** FIZZ3, Adipose tissue-specific secretory factor, ADSF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Resistin	450-19	<i>E.coli</i>	19.5 kDa	5µg	25µg	\$5,200
Murine Resistin	450-28	<i>E.coli</i>	20.2 kDa	5µg	25µg	\$5,200
Rat Resistin	400-35	<i>E.coli</i>	20.0 kDa	5µg	25µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Resistin	500-P183	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Resistin	500-P183BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human Resistin	500-P183G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Resistin	500-P183GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine Resistin	500-P182G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine Resistin	500-P182GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human Resistin	500-M91	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human Resistin	ABTS CATALOG # 900-K235	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human Resistin	ABTS CATALOG # 900-M235	PRICE: \$100
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## ROR1

**Synonyms:** NTRKR1, Neurotrophic tyrosine kinase, receptor-related 1, Tyrosine-protein kinase, transmembrane receptor ROR1, Receptor-tyrosine-kinase-like orphan receptor 1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human ROR1	160-04	CHO cells	42.4 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

## SCF *Stem Cell Factor*

**Synonyms:** c-Kit Ligand, Mast Cell Growth Factor (MGF), Steel Factor (SF)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human SCF	300-07	<i>E.coli</i>	18.4 kDa	2µg	10µg	\$2,400
Murine SCF	250-03	<i>E.coli</i>	18.3 kDa	2µg	10µg	\$2,400
Rat SCF	400-22	<i>E.coli</i>	18.4 kDa	2µg	10µg	\$3,000

\* See page 12 for available Cytokine Packages.

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human SCF	AF-300-07	<i>E.coli</i>	18.4 kDa	2µg	10µg	\$2,600
Murine SCF	AF-250-03	<i>E.coli</i>	18.3 kDa	2µg	10µg	\$2,600
Rat SCF	AF-400-22	<i>E.coli</i>	18.4 kDa	2µg	10µg	\$3,300

\* See page 12 for available Cytokine Packages.

Additional sizes available please inquire

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human SCF	GMP300-07-50µg	<i>E.coli</i>	18.4 kDa	50µg	\$775
PeproGMP® Human SCF	GMP300-07-100µg	<i>E.coli</i>	18.4 kDa	100µg	\$1,450
PeproGMP® Human SCF	GMP300-07-1mg	<i>E.coli</i>	18.4 kDa	1mg	Inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human SCF	500-P48	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human SCF	500-P48BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human SCF	500-P48G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human SCF	500-P48GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine SCF	500-P71	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine SCF	500-P71BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Rat SCF	500-P202	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat SCF	500-P202BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human SCF	500-M44	<i>Mouse</i>	E, WB	500µg	\$150

### Standard ELISA Development Kits

Key: E = ELISA, WB = Western blot

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human SCF	ABTS CATALOG # 900-K34	PRICE: \$320
Human SCF	TMB CATALOG # 900-T34	PRICE: \$320
Murine SCF	ABTS CATALOG # 900-K78	PRICE: \$320
Rat SCF	ABTS CATALOG # 900-K258	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human SCF	ABTS CATALOG # 900-M34	PRICE: \$100
Human SCF	TMB CATALOG # 900-TM34	PRICE: \$100
Rat SCF	ABTS CATALOG # 900-M258	PRICE: \$100

## SCGF- $\alpha$ , - $\beta$ *Stem Cell Growth Factor - $\alpha$ , - $\beta$*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human SCGF- $\alpha$	100-22A	<i>E.coli</i>	33.9 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200
Human SCGF- $\beta$	100-22B	<i>E.coli</i>	25.0 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human SCGF- $\alpha$	500-P162	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human SCGF- $\alpha$	500-P162BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Human SCGF- $\beta$	500-P99G	<i>Goat</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human SCGF- $\beta$	500-P99GBT	<i>Goat</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Sclerostin

**Synonyms:** SOST, SOST1, CDD, VBCH, DAND6

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human Sclerostin	100-49	CHO cells	21.5 kDa	5 $\mu$ g	20 $\mu$ g	\$3900

## SDF-1 $\alpha$ , $\beta$ (CXCL12) *Stromal-Cell Derived Factor-1 $\alpha$ , $\beta$*

**Synonyms:** PBSF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human SDF-1 $\alpha$ (CXCL12)	300-28A	<i>E.coli</i>	8.0 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Murine SDF-1 $\alpha$ (CXCL12)	250-20A	<i>E.coli</i>	7.9 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Rat SDF-1 $\alpha$ (CXCL12)	400-32A	<i>E.coli</i>	7.9 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Human SDF-1 $\beta$ (CXCL12)	300-28B	<i>E.coli</i>	8.5 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Murine SDF-1 $\beta$ (CXCL12)	250-20B	<i>E.coli</i>	8.5 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000
Rat SDF-1 $\beta$ (CXCL12)	400-32B	<i>E.coli</i>	8.4 kDa	2 $\mu$ g	10 $\mu$ g	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human SDF-1 $\alpha$ (CXCL12)	AF-300-28A	<i>E.coli</i>	8.0 kDa	2 $\mu$ g	10 $\mu$ g	\$3,300
Human SDF-1 $\beta$ (CXCL12)	AF-300-28B	<i>E.coli</i>	8.5 kDa	2 $\mu$ g	10 $\mu$ g	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human SDF-1 $\alpha$ (CXCL12)	500-P87A	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human SDF-1 $\alpha$ (CXCL12)	500-P87ABT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine SDF-1 $\alpha$ (CXCL12)	500-P164G	<i>Goat</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine SDF-1 $\alpha$ (CXCL12)	500-P164GBT	<i>Goat</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat SDF-1 $\alpha$ (CXCL12)	500-P315	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat SDF-1 $\alpha$ (CXCL12)	500-P315BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Human SDF-1 $\beta$ (CXCL12)	500-P87BG	<i>Goat</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human SDF-1 $\beta$ (CXCL12)	500-P87BGBT	<i>Goat</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*SDF-1 $\alpha$ ,  $\beta$  continued on next page...*

## SDF-1 $\alpha$ , $\beta$ (CXCL12) *Stromal-Cell Derived Factor-1 $\alpha$ , $\beta$ (continued...)*

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human SDF-1 $\alpha$ (CXCL12)	ABTS CATALOG #	900-K92	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human SDF-1 $\alpha$ (CXCL12)	ABTS CATALOG #	900-M92	PRICE: \$100
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## Semaphorin 3A Fc

**Synonyms:** SEMA3A, SEMAD

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Semaphorin 3A Fc	150-17H	CHO cells	226.2 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000

*Additional sizes available please inquire*

## SF-20

**Synonyms:** Myeloid-derived growth factor (MYDGF)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Murine SF-20	210-25	<i>E.coli</i>	15.8 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Murine SF-20	500-P259	<i>Rabbit</i>	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine SF-20	500-P259BT	<i>Rabbit</i>	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## Slit2-N

**Synonyms:** Slit homolog 2 protein, SLIL3

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Slit2-N	150-11	HEK293 cells	122.35 kDa	5 $\mu$ g	25 $\mu$ g	\$3,900

*Additional sizes available please inquire*

## Sonic Hedgehog (Shh)

**Synonyms:** Hhg-1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Sonic Hedgehog (Shh)	100-45	<i>E.coli</i>	20.0 kDa	5 $\mu$ g	25 $\mu$ g	\$2,800
Murine Sonic Hedgehog (Shh)	315-22	<i>E.coli</i>	20.0 kDa	5 $\mu$ g	25 $\mu$ g	\$2,800

*Additional sizes available please inquire*



## Sox2

**Synonyms:** Sex determinining region Y (SRY)-box 2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Sox2	110-03	<i>E.coli</i>	34.3 kDa	5µg	25µg	\$3,000
Human Sox2-TAT	110-03T	<i>E.coli</i>	36.0 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## SPARC (Osteonectin) *Secreted Protein Acidic and Rich in Cysteine*

**Synonyms:** BM-40, ON

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human SPARC/Osteonectin	120-36	CHO cells	32.7 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## TACI *Transmembrane Activator and CAML Interactor*

**Synonyms:** TNFRSF13B, CD267

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TACI	310-17	<i>E.coli</i>	17.8 kDa	5µg	20µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TACI	500-P166G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TACI	500-P166GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human TACI	ABTS CATALOG #	900-K216	PRICE: \$320
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## TAFA-2

**Synonyms:** Chemokine-like protein TAFA-2, FAM19A2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TAFA-2	300-63	<i>E.coli</i>	11.2 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

S-T

## TARC (CCL17) *Thymus and Activation-Regulated Chemokine*

**Synonyms:** ABCD-2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TARC (CCL17)	300-30	<i>E.coli</i>	8.0 kDa	5µg	20µg	\$3,000
Murine TARC (CCL17)	250-43	<i>E.coli</i>	7.9 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TARC (CCL17)	500-P97	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TARC (CCL17)	500-P97BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## TECK (CCL25) *Thymus Expressed Chemokine*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TECK (CCL25)	300-45	<i>E.coli</i>	14.2 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human TECK (CCL25)	AF-300-45	<i>E.coli</i>	14.2 kDa	5µg	20µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TECK (CCL25)	500-P134	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TECK (CCL25)	500-P134BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human TECK (CCL25)	500-M48	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

## TFF-1, -2, -3 *Trefoil factor-1, -2, -3*

**Synonyms:** **TFF-1:** pS2 protein, HP1.A, Breast Cancer Estrogen-Inducible protein (BCEI), PNR2; **TFF-2:** Spasmolytic Polypeptide (SP), Spasmodysin; **TFF-3:** Intestinal Trefoil Factor (ITF), TFI

### Recombinant Proteins

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TFF-1	300-60	<i>E.coli</i>	6.7 kDa	5µg	20µg	\$3,000
Murine TFF-1	315-31	<i>E.coli</i>	7.4 kDa	5µg	20µg	\$3,000
Human TFF-2	300-59	<i>E.coli</i>	12.0 kDa	5µg	20µg	\$3,000
Murine TFF-2	315-30	<i>E.coli</i>	11.9 kDa	5µg	20µg	\$3,000
Human TFF-3	300-61	<i>E.coli</i>	13.2 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

*TFF-1, -2, -3 continued on next page...*

## TFF-1, -2, -3 *Trefoil factor-1, -2, -3*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TFF-2	500-P312	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TFF-2	500-P312BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## TGF- $\alpha$ *Transforming Growth Factor $\alpha$*

**Synonyms:** Sarcoma growth factor, TGF-type I, ETGF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TGF- $\alpha$	100-16A	<i>E.coli</i>	5.5 kDa	20µg	100µg	\$1,100

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human TGF- $\alpha$	AF-100-16A	<i>E.coli</i>	5.5 kDa	20µg	100µg	\$1,200

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TGF- $\alpha$	500-P16	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TGF- $\alpha$	500-P16BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## TGF- $\beta_1$ , - $\beta_2$ , - $\beta_3$ *Transforming Growth - $\beta_1$ , - $\beta_2$ and - $\beta_3$*

**Synonyms:** TGF- $\beta_1$ : Differentiation inhibiting factor, Cartilage-inducing factor; TGF- $\beta_2$ : Glioblastoma-derived T-cell suppressor factor, BSC-1, Cetermin, Polyergin; TGF- $\beta_3$ : none

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TGF- $\beta_1$	100-21	HEK293 cells	25.0 kDa	2µg	10µg	\$5,200
Human TGF- $\beta_1$	100-21C	CHO cells	25.0 kDa	2µg	10µg	\$5,200
Human TGF- $\beta_2$	100-35	Insect cells	25.0 kDa	2µg	10µg	\$5,200
Human TGF- $\beta_2$	100-35B	HEK293 cells	25.0 kDa	2µg	10µg	\$5,200
Human TGF- $\beta_3$	100-36E	<i>E.coli</i>	25.0 kDa	2µg	10µg	\$5,200

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human TGF- $\beta_1$	AF-100-21C	CHO cells	25.0 kDa	2µg	10µg	\$5,700
Human TGF- $\beta_3$	AF-100-36E	<i>E.coli</i>	25.0 kDa	2µg	10µg	\$5,700

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TGF- $\beta_3$	500-P317	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TGF- $\beta_3$	500-P317BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*TGF- $\beta_1$ , - $\beta_2$ , - $\beta_3$  continued on next page...*

## TGF- $\beta_1$ , - $\beta_2$ , - $\beta_3$ Transforming Growth - $\beta_1$ , - $\beta_2$ and - $\beta_3$ (continued...)

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human TGF- $\beta_1$	500-M66	Mouse	WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

## Thrombomodulin

**Synonyms:** CD141, BDCA-3, THBD, TM

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Thrombomodulin	100-58	HEK293 cells	51.4 kDa	2 $\mu$ g	10 $\mu$ g	\$3,900

Additional sizes available please inquire

## Thymosin- $\beta_4$

**Synonyms:** T $\beta$ -4, Hematopoietic system regulatory peptide, Seraspenide, TMSB4X, TB4X, TMSB4

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human/Murine/Rat Thymosin- $\beta_4$	140-14	<i>E.coli</i>	5.2 kDa	20 $\mu$ g	100 $\mu$ g	\$1,100

Additional sizes available please inquire

## TIGAR TP53-Induced Glycolysis and Apoptosis Regulator

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TIGAR	150-14	<i>E.coli</i>	29.9 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000
Human TIGAR-TAT	150-14T	<i>E.coli</i>	31.6 kDa	5 $\mu$ g	25 $\mu$ g	\$3,000

Additional sizes available please inquire

## TIMP-1 Tissue Inhibitor of Metalloproteinases 1

**Synonyms:** Fibroblast collagenase inhibitor, Erythroid-potentiating activity

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TIMP-1	410-01	<i>E.coli</i>	20.6 kDa	2 $\mu$ g	10 $\mu$ g	\$5,200

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TIMP-1	500-P280	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human TIMP-1	500-P280BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

*TIMP-1 continued on next page...*

## TIMP-1 *Tissue Inhibitor of Metalloproteinases 1 (continued...)*

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human TIMP-1	ABTS CATALOG # 900-K438	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human TIMP-1	ABTS CATALOG # 900-M438	PRICE: \$100
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## TIMP-2 *Tissue Inhibitor of Metalloproteinases 2*

**Synonyms:** CSC-21K

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TIMP-2	410-02	<i>E.coli</i>	21.8 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## Tissue Factor

**Synonyms:** TF, TF1, Coagulation factor III, factor III, F3, Thromboplastin, CD142

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Tissue Factor	150-19T	CHO cells	51.6 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## TL-1A

**Synonyms:** TNFSF15, VEGI

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TL-1A	310-23	<i>E.coli</i>	22.0 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TL-1A	500-P240	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TL-1A	500-P240BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human TL-1A	ABTS CATALOG # 900-K290	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human TL-1A	ABTS CATALOG # 900-M290	PRICE: \$100
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## TLR-3 *Toll-Like Receptor 3*

**Synonyms:** CD283 antigen

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TLR-3	160-01	HEK293 cells	77.4 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## TLR-4 *Toll-Like Receptor 4*

**Synonyms:** TOLL, CD284, ARMD10

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TLR-4	160-06	HEK293 cells	69.3 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## TMIGD2/CD28H Fc

**Synonyms:** Transmembrane and immunoglobulin domain-containing protein 2, CD28 homolog, Immunoglobulin and proline-rich receptor 1 (IGPR-1)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TMIGD2/CD28H Fc	310-42	CHO cells	40.1 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## TNF- $\alpha$ *Tumor Necrosis Factor- $\alpha$*

**Synonyms:** TNFSF2, Cachectin, Differentiation-Inducing Factor (DIF), Necrostatin, Cytotoxin, TNSF1A

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TNF- $\alpha$	300-01A	<i>E.coli</i>	17.4 kDa	10µg	50µg	\$1,500
Murine TNF- $\alpha$	315-01A	<i>E.coli</i>	17.3 kDa	5µg	20µg	\$3,000
Rat TNF- $\alpha$	400-14	<i>E.coli</i>	17.3 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human TNF- $\alpha$	AF-300-01A	<i>E.coli</i>	17.4 kDa	10µg	50µg	\$1,650
Murine TNF- $\alpha$	AF-315-01A	<i>E.coli</i>	17.3 kDa	5µg	20µg	\$3,300

*Additional sizes available please inquire*

*TNF- $\alpha$  continued on next page...*

## TNF- $\alpha$ Tumor Necrosis Factor- $\alpha$ (continued...)

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TNF- $\alpha$	500-P31A	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human TNF- $\alpha$	500-P31ABT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Human TNF- $\alpha$	500-P31AG	Goat	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human TNF- $\alpha$	500-P31AGBT	Goat	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine TNF- $\alpha$	500-P64	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine TNF- $\alpha$	500-P64BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Murine TNF- $\alpha$	500-P64G	Goat	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Murine TNF- $\alpha$	500-P64GBT	Goat	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400
Anti-Rat TNF- $\alpha$	500-P72	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Rat TNF- $\alpha$	500-P72BT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human TNF- $\alpha$	500-M26	Mouse	E, WB	500 $\mu$ g	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human TNF- $\alpha$	ABTS CATALOG # 900-K25	PRICE: \$320
Human TNF- $\alpha$	TMB CATALOG # 900-T25	PRICE: \$320
Murine TNF- $\alpha$	ABTS CATALOG # 900-K54	PRICE: \$320
Murine TNF- $\alpha$	TMB CATALOG # 900-T54	PRICE: \$320
Rat TNF- $\alpha$	ABTS CATALOG # 900-K73	PRICE: \$320
Rat TNF- $\alpha$	TMB CATALOG # 900-T73	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human TNF- $\alpha$	ABTS CATALOG # 900-M25	PRICE: \$100
Human TNF- $\alpha$	TMB CATALOG # 900-TM25	PRICE: \$100
Murine TNF- $\alpha$	ABTS CATALOG # 900-M54	PRICE: \$100
Murine TNF- $\alpha$	TMB CATALOG # 900-TM54	PRICE: \$100
Rat TNF- $\alpha$	ABTS CATALOG # 900-M73	PRICE: \$100
Rat TNF- $\alpha$	TMB CATALOG # 900-TM73	PRICE: \$100

## TNF- $\beta$ Tumor Necrosis Factor- $\beta$

Synonyms: TNFSF1B, Lymphotoxin-alpha (LT- $\alpha$ )

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TNF- $\beta$	300-01B	<i>E.coli</i>	18.6 kDa	5 $\mu$ g	20 $\mu$ g	\$3,000

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TNF- $\beta$	500-P31B	Rabbit	E, WB	50 $\mu$ g	100 $\mu$ g	\$1,700
Biot. Anti-Human TNF- $\beta$	500-P31BBT	Rabbit	E, WB	25 $\mu$ g	50 $\mu$ g	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## sTNF Receptor Type I *soluble Tumor Necrosis Factor Receptor Type I*

**Synonyms:** TNFRSF1A, TNFAR, TNFR60, p60, p55, CD120a, TNFR1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sTNF Receptor Type I	310-07	<i>E.coli</i>	18.3 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human sTNF Receptor Type I	AF-310-07	<i>E.coli</i>	18.3 kDa	5µg	20µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sTNF Receptor Type I	500-P143	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sTNF Receptor Type I	500-P143BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## sTNF Receptor Type II *soluble Tumor Necrosis Factor Receptor Type II*

**Synonyms:** TNFRSF1B, p75, TNFR75, CD120b, TNFR80, p80, TNFR2

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sTNF Receptor Type II	310-12	<i>E.coli</i>	18.9 kDa	5µg	20µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sTNF Receptor Type II	500-P168	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sTNF Receptor Type II	500-P168BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## TPO *Thrombopoietin*

**Synonyms:** Megakaryocyte colony-stimulating factor, c-MPL Ligand, MGDF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TPO	300-18	<i>E.coli</i>	18.6 kDa	2µg	10µg	\$4,300
Murine TPO	315-14	<i>E.coli</i>	18.7 kDa	2µg	10µg	\$4,300
Rat TPO	400-34	<i>E.coli</i>	18.7 kDa	2µg	10µg	\$4,300

\* See page 13 for available Cytokine Packages.

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human TPO	AF-300-18	<i>E.coli</i>	18.6 kDa	2µg	10µg	\$4,700
Murine TPO	AF-315-14	<i>E.coli</i>	18.7 kDa	2µg	10µg	\$4,700
Rat TPO	AF-400-34	<i>E.coli</i>	18.7 kDa	2µg	10µg	\$4,700

\* See page 13 for available Cytokine Packages.

*Additional sizes available please inquire*

*TPO continued on next page...*



## TPO *Thrombopoietin (continued...)*

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human TPO	GMP300-18-50µg	<i>E.coli</i>	18.6 kDa	50µg	\$1,050
PeproGMP® Human TPO	GMP300-18-100µg	<i>E.coli</i>	18.6 kDa	100µg	\$1,750

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TPO	500-P49	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TPO	500-P49BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Human TPO	500-P49G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TPO	500-P49GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human TPO	ABTS CATALOG # 900-K44	PRICE: \$320
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### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human TPO	ABTS CATALOG # 900-M44	PRICE: \$100
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## sTRAIL/Apo2L *TNF-Related Apoptosis-Inducing Ligand*

**Synonyms:** TNFSF10, Apo2 ligand, TL2, CD253

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sTRAIL/Apo2L	310-04	<i>E.coli</i>	19.6 kDa	10µg	50µg	\$1,500
Murine TRAIL	315-19	<i>E.coli</i>	20.0 kDa	10µg	50µg	\$1,500

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sTRAIL/Apo2L	500-P135	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sTRAIL/Apo2L	500-P135BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400
Anti-Murine TRAIL	500-P303	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine TRAIL	500-P303BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human sTRAIL/Apo2L	500-M49	<i>Mouse</i>	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human sTRAIL/Apo2L	ABTS CATALOG # 900-K141	PRICE: \$320
Human sTRAIL/Apo2L	ABTS CATALOG # 900-M141	PRICE: \$100

## sTRAIL Receptor-1 *soluble TRAIL Receptor-1*

**Synonyms:** TNFRSF10A, DR4, Apo2, CD261

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sTRAIL Receptor-1	310-18	<i>E.coli</i>	22.7 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## sTRAIL Receptor-2 *soluble TRAIL Receptor-2*

**Synonyms:** TNFRSF10B, DR5, KILLER, TRICK2A, TRICKB, CD262

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human sTRAIL Receptor-2	310-19	<i>E.coli</i>	14.9 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human sTRAIL Receptor-2	500-P299	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human sTRAIL Receptor-2	500-P299BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## TREM-1 Fc *Triggering receptor expressed on monocytes 1*

**Synonyms:** CD354

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TREM-1 Fc	310-36	CHO cells	92.6 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## TSG *Twisted Gastrulation Protein*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TSG	120-09	<i>E.coli</i>	22.2 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

## TSLP *Thymic Stromal Lymphopoietin*

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TSLP	300-62	<i>E.coli</i>	15.0 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TSLP	500-P258	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TSLP	500-P258BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human TSLP	ABTS CATALOG # 900-K334	PRICE: \$320
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## TWEAK *TNF-related Weak Inducer of Apoptosis*

**Synonyms:** TNFSF12, DR3LG, Apo3 Ligand

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TWEAK	310-06	<i>E.coli</i>	17.0 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human TWEAK	AF-310-06	<i>E.coli</i>	17.0 kDa	5µg	25µg	\$3,300

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human TWEAK	500-P137G	<i>Goat</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human TWEAK	500-P137GBT	<i>Goat</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human TWEAK	ABTS CATALOG # 900-K149	PRICE: \$320
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## TWEAK Receptor *TNF-related Weak Inducer of Apoptosis Receptor*

**Synonyms:** TNFRSF12A, FGF-inducible 14, FN14

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human TWEAK Receptor	310-21	<i>E.coli</i>	5.6 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

## Uteroglobulin

**Synonyms:** Clara Cell Phospholipid-Binding Protein, CCPBP, Clara Cells 10 kDa secretory protein, CC10, Secretoglobulin family 1A member 1, Urinary protein 1, UP-1, UP, Urine protein 1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human Uteroglobulin	150-18	<i>E.coli</i>	16.1 kDa	10µg	50µg	\$1,500

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human Uteroglobulin	500-P330	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Uteroglobulin	500-P330BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## VAP-1 Vascular Adhesion Protein-1

**Synonyms:** AOC3, SSAO, HPAO, Copper Amine Oxidase, Membrane Primary Amine Oxidase

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human VAP-1	150-16	CHO cells	81.8 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human VAP-1	500-P326	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human VAP-1	500-P326BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## Vaspin

**Synonyms:** Visceral adipose tissue-derived serpin

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human Vaspin	130-11	<i>E.coli</i>	45.2 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human Vaspin	500-P256	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Vaspin	500-P256BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated Key: E = ELISA, WB = Western blot

## VCAM-1 *Vascular Cell Adhesion Molecule 1*

**Synonyms:** CD106, INCAM-100, MGC108734, MGC99561, VCAM, VCAM1, VCAM1B, VECAM1

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human VCAM-1	150-04	HEK293 cells	74.1 kDa	10µg	50µg	\$1,500
Murine VCAM-1	315-37	CHO cells	74.4 kDa	10µg	50µg	\$1,500

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human VCAM-1	500-P300	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human VCAM-1	500-P300BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## VEGF *Vascular Endothelial Growth Factor*

**Synonyms:** VEGF<sub>121</sub>: Vascular Endothelial Growth Factor 121, VPF, VEGF-A; VEGF<sub>165</sub>: Vascular Endothelial Growth Factor 165, VPF, Folliculostellate cell-derived growth factor, Glioma-derived endothelial cell mitogen, VEGF-A

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$80	Size B \$195	1mg
Human VEGF <sub>121</sub>	100-20A	<i>E.coli</i>	28.4 kDa	2µg	10µg	\$3,900
Human VEGF <sub>165</sub>	100-20	<i>E.coli</i>	38.2 kDa	2µg	10µg	\$3,900
Murine VEGF <sub>165</sub>	450-32	<i>E.coli</i>	39.0 kDa	2µg	10µg	\$3,900
Rat VEGF <sub>165</sub>	400-31	<i>E.coli</i>	38.5 kDa	2µg	10µg	\$3,900

Additional sizes available please inquire

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A \$95	Size B \$215	1mg
Human VEGF <sub>121</sub>	AF-100-20A	<i>E.coli</i>	28.4 kDa	2µg	10µg	\$4,300
Human VEGF <sub>165</sub>	AF-100-20	<i>E.coli</i>	38.2 kDa	2µg	10µg	\$4,300
Murine VEGF <sub>165</sub>	AF-450-32	<i>E.coli</i>	39.0 kDa	2µg	10µg	\$4,300

Additional sizes available please inquire

### PeproGMP® Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size	Price
PeproGMP® Human VEGF <sub>165</sub>	GMP100-20-50µg	<i>E.coli</i>	38.2 kDa	50µg	\$600
PeproGMP® Human VEGF <sub>165</sub>	GMP100-20-100µg	<i>E.coli</i>	38.2 kDa	100µg	\$1,000
PeproGMP® Human VEGF <sub>165</sub>	GMP100-20-1mg	<i>E.coli</i>	38.2 kDa	1mg	\$7,000

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A \$195	Size B \$250	1mg
Anti-Human VEGF <sub>165</sub>	500-P10	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human VEGF <sub>165</sub>	500-P10BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Human VEGF <sub>165</sub>	500-P10G	Goat	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human VEGF <sub>165</sub>	500-P10GBT	Goat	E, WB	25µg	50µg	\$3,400
Anti-Murine VEGF <sub>165</sub>	500-P131	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Murine VEGF <sub>165</sub>	500-P131BT	Rabbit	E, WB	25µg	50µg	\$3,400
Anti-Rat VEGF <sub>165</sub>	500-P275	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Rat VEGF <sub>165</sub>	500-P275BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## VEGF *Vascular Endothelial Growth Factor (continued...)*

### Monoclonal Antibodies

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size	PRICE
Anti-Human VEGF <sub>165</sub>	500-M88	Mouse	E, WB	500µg	\$150

Key: E = ELISA, WB = Western blot

### Standard ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 1000 ELISA plate wells.

Human VEGF <sub>165</sub>	ABTS CATALOG #	900-K10	PRICE: \$320
Human VEGF <sub>165</sub>	TMB CATALOG #	900-T10	PRICE: \$320
Murine VEGF <sub>165</sub>	ABTS CATALOG #	900-K99	PRICE: \$320
Rat VEGF <sub>165</sub>	ABTS CATALOG #	900-K436	PRICE: \$320

### Mini ELISA Development Kits

Each kit contains: capture antibody, detection antibody, calibrated standard, and HRP Conjugate, sufficient to assay the target cytokine in at least 200 ELISA plate wells.

Human VEGF <sub>165</sub>	ABTS CATALOG #	900-M10	PRICE: \$100
Human VEGF <sub>165</sub>	TMB CATALOG #	900-TM10	PRICE: \$100
Murine VEGF <sub>165</sub>	ABTS CATALOG #	900-M99	PRICE: \$100
Rat VEGF <sub>165</sub>	ABTS CATALOG #	900-M436	PRICE: \$100

V

## VEGF-B *Vascular Endothelial Growth Factor-B*

**Synonyms:** VEGF-related factor, VRF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human VEGF-B	100-20B	<i>E.coli</i>	38.0 kDa	5µg	20µg	\$3,900

Additional sizes available please inquire

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human VEGF-B	500-P267	Rabbit	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human VEGF-B	500-P267BT	Rabbit	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

Key: E = ELISA, WB = Western blot

## VEGF-C *Vascular Endothelial Growth Factor-C*

**Synonyms:** VRP, Flt4-Ligand

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human VEGF-C	100-20CD	HEK293 cells	26.2 kDa	5µg	20µg	\$3,000

Additional sizes available please inquire

## VEGF-D *Vascular Endothelial Growth Factor-D*

**Synonyms:** FIGF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human VEGF-D	100-20D	HEK293 cells	26.2 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

## Vimentin

**Synonyms:** Vim

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Vimentin	110-10	<i>E.coli</i>	54.3 kDa	20µg	100µg	\$1,100

*Additional sizes available please inquire*

## Visfatin

**Synonyms:** PBEF (Pre-B-cell colony-enhancing factor), NAmPRTase (nicotinamide phosphoribosyltransferase), Nampt, VF

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Visfatin	130-09	<i>E.coli</i>	52.6 kDa	5µg	25µg	\$3,000

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Visfatin	500-P222	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Visfatin	500-P222BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

**Key:** E = ELISA, WB = Western blot

## Vitronectin

**Synonyms:** VTN, Serum-spreading factor, V75

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Vitronectin	140-09	HEK293 cells	52.2 kDa	100µg	500µg	\$250

*Additional sizes available please inquire*

### Animal-Free Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$95	\$215	
Human Vitronectin	AF-140-09	HEK293 cells	52.2 kDa	100µg	500µg	\$275

*Additional sizes available please inquire*

## WISP-1 *WNT-1 Inducible Signaling Pathway protein-1*

**Synonyms:** CCN4, Wnt-1-induced secreted protein

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human WISP-1	120-18	<i>E.coli</i>	38.1 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

## WISP-3 *WNT-1 Inducible Signaling Pathway protein-3*

**Synonyms:** CCN6

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human WISP-3	120-20	<i>E.coli</i>	36.8 kDa	5µg	20µg	\$3,900

*Additional sizes available please inquire*

## Wnt-1

**Synonyms:** INT-1, Wnt-1 proto-oncogene protein (precursor)

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Wnt-1	120-17	<i>E.coli</i>	38.4 kDa	2µg	10µg	\$5,200

*Additional sizes available please inquire*

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Wnt-1	500-P250	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Wnt-1	500-P250BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

**Key:** E = ELISA, WB = Western blot

## Wnt-3a

**Synonyms:** Wingless-type MMTV (Mouse Mammary Tumor Virus) integration site family member 3a

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Murine Wnt-3a	315-20	<i>cell culture</i>	37.4 kDa	2µg	10µg	N/A

### Polyclonal Antibodies - Antigen Affinity Purified

PRODUCT	CATALOG #	SOURCE	APPLICATIONS	Size A	Size B	1mg
				\$195	\$250	
Anti-Human Wnt-3a	500-P251	<i>Rabbit</i>	E, WB	50µg	100µg	\$1,700
Biot. Anti-Human Wnt-3a	500-P251BT	<i>Rabbit</i>	E, WB	25µg	50µg	\$3,400

Biot. = Biotinylated

**Key:** E = ELISA, WB = Western blot



## Wnt-7a

**Synonyms:** None

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Wnt-7a	120-31	HEK293 cells	35.5 kDa	3µg	15µg	\$4,800

*Additional sizes available please inquire*

## WNT-9b

**Synonyms:** Wnt15, Wnt14B, UNQ6973/PRO21956

### RUO Cytokines

PRODUCT	CATALOG #	SOURCE	MW	Size A	Size B	1mg
				\$80	\$195	
Human Wnt-9b	120-49	CHO cells	36.9 kDa	5µg	20µg	\$5,200

*Additional sizes available please inquire*

## Control Antibodies

PRODUCT	CATALOG #	Size	PRICE
Normal Goat IgG	500-G00	1mg	\$65
Normal Mouse IgG	500-M00	1mg	\$65
Normal Rabbit IgG	500-P00	500µg	\$50

W

# Chemokine Nomenclature

Systematic Name CXC Chemokines	Functional Name(s) (mouse protein)	Responding Cell Type(s) (mouse protein)	Known Receptor(s)
<b>CXC Chemokines</b>			
CXCL1	GRO1, GRO- $\alpha$ , MGSA, NAP-3 (KC)	PMN	CXCR1, CXCR2
CXCL2	GRO2, GRO- $\beta$ , MIP2- $\alpha$ (MIP-2)	PMN	CXCR1, CXCR2
CXCL3	GRO3, GRO- $\gamma$ , MIP2- $\beta$ (DCIP-1)	PMN	CXCR2
CXCL4	PF-4, Oncostatin-A	PMN, Mo	CXCR3B
CXCL5	ENA-78	PMN	CXCR2
CXCL6	GCP-2, CKA-3 (LIX)	PMN	CXCR1, CXCR2
CXCL7	NAP-2, PBP, LDGF, MDGF	PMN	CXCR1, CXCR2
CXCL8	IL-8, GCP-1, NAP-1	PMN, Bs	CXCR1, CXCR2
CXCL9	MIG	actT [Th1], NK	CXCR3
CXCL10	IP-10 (CRG-2)	Mo, actT [Th1], NK	CXCR3
CXCL11	I-TAC, IP-9	actT [Th1], NK	CXCR3, CXCR7
CXCL12	SDF-1, SDF-1 $\alpha/\beta$ , PBSF	All cell types	CXCR4, CXCR7
CXCL13	BCA-1, BLC	B, (Mo)	CXCR5
CXCL14	BRACK, MIP-2G	PMN, mDC (B, Mo)	unknown
CXCL15	(Lungkine)	(PMN)	unknown
CXCL16	SR-PSOX	actT	CXCR6
CXCL17	VEGF co-regulated chemokine 1, DMC	Mo, iDC	unknown
<b>C Chemokines</b>			
XCL1	Lymphotactin, ATAC, SCM-1	Tr	XCR1
XCL2	SCM-1 $\beta$	Tr	XCR1
<b>CX3C Chemokines</b>			
CX3CL1	Fractalkine, Neurotactin, CX3C	Mo, actT, NK	CX3CR1
<b>CC Chemokines</b>			
CCL1	I-309 (TCA-3)	iDC, actT [Th2], Mo (PMN)	CCR8
CCL2	MCP-1, MCAF, JE	Bs, Mo, actT, NK, iDC	CCR2, CCR4
CCL3	MIP-1 $\alpha$ , LD78 $\alpha$	Eo, Mo, actT, NK, iDC (PMN)	CCR1, CCR4, CCR5
CCL3L1	LD78 $\beta$	Mo, actT, B	CCR1, CCR3, CCR5
CCL4	MIP-1 $\beta$ , LAG-1	Mo, actT [Th1], NK, iDC	CCR5
CCL4L1	LAG-1 gene duplication	Mo	CCR1, CCR5
CCL5	RANTES	Eo, Bs, Mo, actT, NK, iDC, Tm	CCR1, CCR3, CCR4, CCR5
CCL6	(C-10)	(Mo)	CCR1
CCL7	MCP-3 (FIC)	Eo, Bs, Mo, actT, NK, iDC	CCR1, CCR2, CCR3
CCL8	MCP-2	Eo, Bs, Mo, actT, NK, iDC	CCR1, CCR2B, CCR3, CCR5
CCL9/10	(MIP-1 $\gamma$ , MRP-2)	(PMN, actT)	CCR1
CCL11	Eotaxin	Eo, Bs, actT [Th2], iDC	CCR3
CCL12	(MCP-5)	(Eo, Bs, Mo, actT, NK, iDC)	CCR2
CCL13	MCP-4, CK $\beta$ -10	Eo, Bs, Mo, actT, NK, iDC	CCR1, CCR2, CCR3
CCL14	HCC-1	Eo, Mo, T	CCR1, CCR3, CCR5
CCL15	MIP-5, MIP-1 $\delta$ , HCC-2, LKN-1	Mo, T	CCR1, CCR3
CCL16	LEC, HCC-4	Mo, actT [Th1]	CCR1
CCL17	TARC (ABCD-2)	actT [Th2]	CCR4
CCL18	MIP-4, DC-CK1, PARC, AMAC-1	Tr, iDC	unknown
CCL19	MIP-3 $\beta$ , ELC, Exodus-3, CK $\beta$ -11	Tr, actT, mDC	CCR7
CCL20	MIP-3 $\alpha$ , LARC, Exodus-1	Tm, B, iDC, PMN	CCR6
CCL21	Exodus-2, 6Ckine, SLC	Tr, actT, mDC	CCR7
CCL22	MDC, STCP-1 (ABCD-1)	Mo, actT [Th2], NK, iDC	CCR4
CCL23	MIP-3, MPIF-1, CK $\beta$ -8	PMN, Mo, Tr	CCR1
CCL24	Eotaxin-2, MPIF-2, CK $\beta$ -6	Eo, Bs, actT [Th2], iDC, PMN, Tr	CCR3
CCL25	TECK	Thymocytes, Tr, iDC	CCR9
CCL26	MIP-4 $\alpha$ , Eotaxin-3	Eo, Bs, actT [Th2], iDC	CCR3
CCL27	CTACK, ILC, Eskine	actT	CCR10
CCL28	MEC	actT, Tr, Eo	CCR3, CCR10

KEY
Tm = memory T cells
B = B-cells
actT = activated T cell
Bs = Basophil
Tr = resting T cell
T = T cells
Eo = Eosinophil
NK = Natural Killer cells
Mo = monocyte
PMN = neutrophils
mDC = mature dendritic cells
iDC = immature dendritic cells

# FGF Family

Fibroblast Growth Factors	Target Cells (Partial list)	Receptors	Function (Partial list)
<b>FGF1 (Acidic FGF)</b> Heparin-Binding Growth Factor-1 (HBGF-1) ECGF-beta (Endothelial Cell Growth Factor-beta)	mesenchymal, neuroectodermal endothelial cells	all FGF receptors	Angiogenic <i>in vivo</i> , mitogenic <i>in vitro</i> , wound healing
<b>FGF2 (Basic FGF)</b> Heparin-Binding Growth Factor-2 (HBGF-2) Prostatropin	mesenchymal, neuroectodermal endothelial cells	1b, 1c, 2c, 3c, 4	Vasculogenesis, wound healing, angiogenesis, hematopoiesis, neuron survival
<b>FGF3</b> int-2	epithelial cells that express FGF receptor 2b	2b	Mesoderm induction, angiogenesis, inner ear development
<b>FGF4</b> Heparin Secretory Transforming protein (HST-1) Transforming protein KS3 Heparin-Binding Growth Factor-4 (HBGF-4)	cells that express FGF receptors	1c, 2c, 3c, 4	Angiogenesis, vertebrate limb development and development of stomach cancer
<b>FGF5</b> Heparin-Binding Growth Factor-5 (HBGF-5), Smag-82	cells that express FGF receptors	1c, 2c	Hair growth and development
<b>FGF6</b> Heparin-Binding Growth Factor-6 (HBGF-6) HST-2	cells that express FGF receptors	1c, 2c, 4	Skeletal muscle development
<b>FGF7/KGF</b> (Keratinocyte Growth Factor) Heparin-Binding Growth Factor-7 (HBGF-7)	keratinocytes and epithelial cells that express FGF receptor 2b	2b	Keratinocyte growth factor, kidney and lung development, angiogenesis and wound healing
<b>FGF8</b> Androgen-Induced Growth Factor (AIGF), Heparin-Binding Growth Factor-8 (HBGF-8)	mammary carcinoma cells and other cells that express FGF receptors	2c, 3c, 4 (possibly 1c)	Limb, central nervous system, cardiac outflow tract development
<b>FGF9</b> Glia Activating Factor (GAF) Heparin-Binding Growth Factor-9 (HBGF-9)	glial cells, astrocyte cells and other cells that express FGF receptors	1c, 2c, 3b, 3c, 4	Glia-activating factor, motor neuron survival, lung and testes development
<b>FGF10</b> FGFA Keratinocyte growth factor-2	epithelial cells that express FGF receptor 2b	2b	Wound healing, multi-organ including limb and lung development
<b>FGF11</b> FGFB Fibroblast growth factor Homologous Factor-3 (FHF-3)	nuclear processes unrelated to the secreted FGFs	none	Appears to be involved in nervous system development and function
<b>FGF12</b> FGFC Fibroblast growth factor Homologous Factor-1 (FHF-1)	nuclear processes unrelated to the secreted FGFs	none	Appears to be involved in nervous system development and function
<b>FGF13</b> FGFD Fibroblast growth factor Homologous Factor-2 (FHF-2)	nuclear processes unrelated to the secreted FGFs	none	Appears to be involved in nervous system development and function
<b>FGF14</b> FGFE Fibroblast growth factor Homologous Factor-4 (FHF-4)	nuclear processes unrelated to the secreted FGFs	none	Regulates central nervous system development and function
<b>FGF15</b> FGFF, identified in mouse not human	cells that express FGF receptor 4	4	Regulator of cell division and patterning in specific regions of embryonic brain, spinal cord and sensory organs
<b>FGF16</b> FGFG	cells that express FGF receptors	2c, 3c	Central nervous system development
<b>FGF17</b> FGFH	cells that express FGF receptors	1c, 2c, 3c, 4	Signals induction and patterning of embryonic brain
<b>FGF18</b> zFGF5 FGFI	cells that express FGF receptors	1c, 2c, 3c, 4	An essential regulator of long bone and calvarial development
<b>FGF19</b> GGFJ, identified in human not mouse	cells that express FGF receptor 4	4	Expressed during brain development and during embryogenesis, regulates multiple metabolic processes in adulthood
<b>FGF20</b> FGFK	epithelial and mesenchymal cells	1c, 2c, 3c	Expressed during limb and brain development
<b>FGF21</b> FGFL	unknown at the time of printing	unknown at the time of printing	Expressed in liver and thymus, may play a role in Type 2 Diabetes
<b>FGF22</b> FGFM	hair follicle keratinocytes	unknown at the time of printing	May be involved in cutaneous develop- ment and repair, and hair development
<b>FGF23</b> FGFN	renal proxima epithelial cells	3c	Expressed in brain and thymus, regulates phosphate homeostasis, mutant in hypo- phosphatemic rickets, regulates multiple metabolic processes in adulthood

# TGF- $\beta$ Superfamily

Name	Synonyms	Main Function	Natural Antagonists/ Binding Proteins
TGF- $\beta_1$	Differentiation inhibiting factor, cartilage-inducing factor	Regulates cell proliferation, growth, differentiation and motility. Involved in adipogenesis, chondrogenesis, embryogenesis, tissue remodeling, wound healing and tumor formation.	Follistatin, Follistatin-Like Related Gene (FLRG), Decorin, alpha-2 macroglobulin
TGF- $\beta_2$	Glioblastoma-derived T-cell suppressor factor, BSC-1, Cetermin, Polyvergin	Regulates cell proliferation, growth, differentiation and motility. Involved in adipogenesis, chondrogenesis, embryogenesis, tissue remodeling, wound healing and tumor formation.	Decorin, alpha-2 macroglobulin
TGF- $\beta_3$	None	Regulates cell proliferation, growth, differentiation and motility. Involved in adipogenesis, chondrogenesis, embryogenesis, tissue remodeling, wound healing and tumor formation.	
TGF- $\beta_4$	Endometrial Bleeding Associated Factor beta-4, (EBAF) Lefty preproprotein, LEFTA	Essential for left-right (L-R) asymmetry determination of organ systems. Possible role in endometrial bleeding.	
Inhibin A	Inhibin alpha & beta A	Inhibits secretion of follitropin by the pituitary gland, regulates embryogenesis, osteogenesis, hematopoiesis, reproductive physiology and hormone secretion from the hypothalamic, pituitary and gonadal glands.	
Inhibin B	Inhibin alpha & beta B	Inhibits secretion of follitropin by the pituitary gland, regulates embryogenesis, osteogenesis, hematopoiesis, reproductive physiology and hormone secretion from the hypothalamic, pituitary and gonadal glands.	
Activin A	Activin beta-A, Inhibin beta-1, FRP (Follicle-stimulating hormone-Releasing Protein), FSH-releasing extra protein, FSH-releasing factor, EDF (Erythroid Differentiation Factor)	Regulates embryogenesis, osteogenesis, hematopoiesis, reproductive physiology and hormone secretion from the hypothalamic, pituitary and gonadal glands.	Follistatin, Follistatin-Like Related Gene (FLRG), GASP-1, Cerberus, alpha2 macroglobulin, DAN
Activin AB	Activin beta A & beta B	Regulates embryogenesis, osteogenesis, hematopoiesis, reproductive physiology and hormone secretion from the hypothalamic, pituitary and gonadal glands.	
Activin B	Activin beta-B, Inhibin beta-2	Regulates embryogenesis, osteogenesis, hematopoiesis, reproductive physiology and hormone secretion from the hypothalamic, pituitary and gonadal glands.	
Activin C	Activin beta-C, Inhibin beta-C, blastocyst B1	Regulates embryogenesis, osteogenesis, hematopoiesis, reproductive physiology and hormone secretion from the hypothalamic, pituitary and gonadal glands.	
Activin E	Activin beta-E, Inhibin beta-E	Regulates embryogenesis, osteogenesis, hematopoiesis, reproductive physiology and hormone secretion from the hypothalamic, pituitary and gonadal glands.	
BMP-2	BMP-2A	Induces cartilage and bone formation, plays a role in cardiac morphogenesis.	Noggin, Chordin, Follistatin, Follistatin-Like Related Gene (FLRG), GASP-1, DAN, Cerberus, Gremlin
BMP-3	Osteogenin, BMP-3A	Induces cartilage and bone formation.	
BMP-3B	GDF-10	Biological function unknown, but may play a role in differentiation of osteoblasts, augmenting BMP-2 activity.	
BMP-4	BMP2B (BMP2B1, BMP2B2, Bmp2-rs1), DVR4	Induces cartilage and bone formation, involved in mesoderm induction, tooth development, limb formation and fracture repair.	Noggin, Chordin, Chordin-like/Neuralin/Ventropin, Follistatin, DAN, Cerberus, Gremlin
BMP-5	None	Induces cartilage and bone formation.	Noggin, Chordin-like/Neuralin/Ventropin, Sclerostin/SOST
BMP-6	VGR, Vg-1-related protein	Induces cartilage and bone formation.	Noggin, Chordin-like/Neuralin/Ventropin, Follistatin, Follistatin-Like Related Gene (FLRG), Sclerostin/SOST
BMP-7	OP-1 (Osteogenic Protein-1)	Induces cartilage and bone formation, involved in calcium regulation and bone homeostasis. May act as an osteoinductive factor responsible for epithelial osteogenesis.	Noggin, Chordin, Follistatin-Like Related Gene (FLRG), DAN, Cerberus, Sclerostin/SOST
BMP-8	BMP-8a, OP-2 (Osteogenic Protein-2)	Induces cartilage and bone formation, involved in calcium regulation and bone homeostasis. May act as an osteoinductive factor responsible for epithelial osteogenesis.	
BMP-8b	OP-2 (Osteogenic Protein-2)	Stimulates cartilage and bone formation, implicated in calcium regulation and bone homeostasis.	
BMP-9	GDF-2	May be involved in bone formation, regulates blood glucose homeostasis, potential autocrine/paracrine mediator in the hepatic reticuloendothelial system, involved in chondrogenesis.	

Continued...

# TGF- $\beta$ Superfamily Continued...

Name	Synonyms	Main Function	Natural Antagonists/ Binding Proteins
<b>BMP-10</b>	None	Plays a crucial role in trabeculation of the embryonic heart.	
<b>BMP-11</b>	GDF-11	Involved in the patterning of both mesodermal and neural tissues and in establishing the skeletal muscle. Acts globally to specific positional identity along the anterior/posterior axis.	Follistatin, Follistatin-like related gene (FLRG), GASP-1
<b>BMP-12</b>	GDF-7, CDMP-3	Induces the formation of tendon and ligament tissues.	
<b>BMP-13</b>	GDF-6, CDMP-2	Plays a role in cartilage homeostasis, involved in embryonic skeletal development, and formation of a tendon-like tissue.	Noggin
<b>BMP-14</b>	GDF-5, CDMP-1	Essential for limb cartilage and limb-joint formation in developing mice. Involved in embryonic skeletal development.	Noggin, DAN
<b>BMP-15</b>	GDF-9B	An oocyte-specific factor that regulates granulosa cell proliferation and differentiation, and is essential for normal follicular growth.	
<b>GDF-1</b>	Embryonic growth/ differentiation factor	May be involved in mediating cell differentiation events during embryonic development.	
<b>GDF-2</b>	BMP-9	Implicated in bone formation.	
<b>GDF-3</b>	Vgr-2	Embryonal carcinoma stem cell-associated marker <i>in vitro</i> and <i>in vivo</i> .	
<b>GDF-5</b>	CDMP-1, BMP-14	Essential for limb cartilage and limb-joint formation in developing mice. Involved in embryonic skeletal development.	Noggin, DAN
<b>GDF-6</b>	BMP-13, CDMP-2	Plays a role in cartilage homeostasis involved in embryonic skeletal development and formation of a tendon-like tissue.	Noggin
<b>GDF-7</b>	BMP-12, CDMP-3	Induces the formation of tendon and ligament tissues.	
<b>GDF-8</b>	Myostatin	Regulates skeletal muscle mass.	Follistatin, Follistatin-Like Related Gene (FLRG), GASP-1
<b>GDF-9</b>	None	Essential for normal follicular growth.	
<b>GDF-10</b>	BMP-3B, BIP (Bone Inducing Protein)	Biological function unknown, but may play a role in differentiation of osteoblasts, augmenting BMP-2 activity.	
<b>GDF-11</b>	BMP-11	Involved in the patterning of both mesodermal and neural tissues and in establishing the skeletal muscle. Acts globally to specific positional identity along the anterior/posterior axis.	Follistatin, Follistatin-Like Related Gene (FLRG), GASP-1
<b>GDF-15</b>	PLAB, Placental TGF $\beta$ , Prostate Differentiation Factor (PDF), NRG-1, MIC-1 (Macrophage Inhibiting Cytokine-1)	Possible mediator of placental control of embryonic development, may act as an autocrine regulatory molecule.	
<b>GDNF</b>	ATF (Astrocyte-derived Trophic Factor)	Promotes dopamine uptake and survival and morphological differentiation of midbrain neurons.	
<b>Artemin</b>	ART, ARTN, Enovin, Neublastin	Supports the survival of all peripheral ganglia such as sympathetic, neural crest and placodally-derived sensory neurons, and dopaminergic midbrain neurons.	
<b>Neurturin</b>	NTN, NRTN	Promotes the development and survival of sympathetic and sensory neurons.	
<b>Persephin</b>	PSP, PSPN	Promotes the survival of ventral midbrain dopaminergic neurons and motor neurons, and promotes ureteric bud branching.	
<b>LEFTY-1</b>	LEFTYB, Protein Lefty B	Essential for left-right (L-R) asymmetry of organ systems.	
<b>LEFTY-2</b>	LEFTYA, TGF- $\beta_4$ , Protein Lefty A	Essential for left-right (L-R) asymmetry of organ systems.	
<b>AMH</b> ( <i>anti-Muellerian Hormone</i> )	MIS, Muellerian inhibiting substance	Causes regression of the Muellerian duct, inhibits the growth of tumors derived from tissues of Muellerian duct origin.	
<b>Dorsalin</b> ( <i>chick</i> )	Dorsalin-1, DSL-1	Regulates cell differentiation within neural tube.	
<b>NODAL</b>	None	Essential for mesoderm formation and subsequent organization of axial structures.	Cerberus

# Neurotrophin/Neurotrophic Cytokines

Functional Name	Synonyms	Main Neurotrophic Functions (Partial List)	Disease/Disorder Relation (Partial List)	Receptors
<b>β-NGF</b> (beta-Nerve Growth Factor)	NGF-β	Supports survival and maintenance of neurons in the sensory and sympathetic nervous systems	Alzheimer's, Parkinson's, diabetic peripheral neuropathy, cardiovascular diseases	LNGFR, gp140/trk, p75NTR
<b>BDNF</b> (Brain Derived Neurotrophic Factor)	Abrineurin	Supports survival and maintenance of neurons in the central nervous system and peripheral nervous systems	Parkinson's, diabetic peripheral neuropathy, ALS, Huntington's	LNGFR, gp145/trkB, p75NTR
<b>NNT-1/BCSF-3</b> (Novel Neurotrophin-1/ B-Cell Stimulating Factor-3)	Cardiotrophin-like cytokine (CLCF1)	Supports survival of motor and sympathetic neurons in chick embryos	Multifocal neuronal hypoplasia, neurodegenerative eye diseases (glaucoma), CISS (cold-induced sweating syndrome)	LIFR-β, gp130
<b>NT-3</b> (Neurotrophin-3)	NGF-2, HGNF	Promotes growth and survival of new and existing neurons	Diabetic peripheral neuropathy, periodontal diseases	Trk, TrkB, TrkC, p75NTR
<b>NT-4</b> (Neurotrophin-4)	NT-4/NT-5	Promotes survival of peripheral sensory sympathetic neurons	Huntington's, glaucoma	TrkB, p75NTR
<b>GDNF</b> (Glial-Derived Neurotrophic Factor)	ATF-1	Promotes dopamine uptake, survival and morphological differentiation of midbrain neurons	Parkinson's, ALS, Huntington's	RET/GFR1α-4α
<b>MANF</b> (Mesencephalic Astrocyte-Derived Neurotrophic Factor)	ARMET, Arginine-Rich Protein (ARP)	Promotes survival, growth and function of dopamine-specific neurons	Parkinson's, cancer	Unknown at time of printing
<b>CDNF</b> (Cerebral Dopamine Neurotrophic Factor)	ARMETL1	Promotes survival, growth and function of dopamine-specific neurons	Parkinson's	Unknown at time of printing
<b>CNTF</b> (Ciliary Neurotrophic Factor)	None	Promotes survival of ciliary neurons, primary sensory neurons, motor neurons, basal forebrain neurons, and type 2 astrocytes	ALS, Huntington's	CNTFR-α
<b>IL-6</b> (Interleukin-6)	26 kDa protein, IFN-β2, B-cell Differentiation Factor (BCDF), BSF-2, HPGF, HSF, MGI-2	Involved in inflammation associated with Alzheimer's disease	Diabetes, atherosclerosis, Alzheimer's, depression, rheumatoid arthritis, systematic lupus, cancer, MS	IL-6Rα, gp130
<b>Oncostatin M</b>	OSM	Involved in the regulation of neurogenesis	Rheumatoid arthritis, atherosclerosis, cancer, TEL/JAK2 disease	LIFR-high affinity, gp130-low affinity
<b>Cardiotrophin-1</b>	CT-1	Enhances survival of different neuronal populations	Motor Neuron Diseases (MND), cardiovascular diseases	gp130, LIFR
<b>IL-11</b> (Interleukin-11)	AGIF (Adipogenesis Inhibitory Factor)	Survival of oligodendrocytes, involved in inflammation associated with MS	Atherosclerosis, MS	IL-11Rα, gp130
<b>LIF</b> (Leukemia Inhibitory Factor)	Differentiation-stimulating factor, D-factor, Melanoma-Derived LPL inhibitor (MLPLI)	Promotes stimulation of differentiation of cholinergic nerves	Systemic lupus, cancer, epidermal hyperplasia in ALS	LIFR
<b>Pleiotrophin</b>	PTN, Heparin Affin Regulatory Protein (HARP), Heparin-Binding Growth Factor-8 (HBGF-8), Osteoblast-Specific Factor-1 (OSF-1)	Promotes neurite outgrowth	Angiogenesis, Parkinson's, cancer	ALK
<b>Midkine</b>	MK, NEGF-2	Promotes neurite outgrowth	Alzheimer's, cancer	ALK
<b>Neurturin</b>	NTN, NRTN	Promotes survival of sympathetic and sensory neurons	Parkinson's	Prefers RET/GFR2α
<b>Artemin</b>	ART, ARTN, Enovin, Neublastin	Promotes the survival of sympathetic, neural crest, placodally-derived sensory neurons, and dopaminergic midbrain neurons	Chronic Pain	Prefers RET/GFR3α
<b>Persephin</b>	PSP, PSPN	Promotes the survival of ventral midbrain dopaminergic neurons and motor neurons after sciatic nerve oxotomy	Alzheimer's	Prefers RET/GFR4α

# TNF Nomenclature

## TNF Superfamily – Ligands

Nomenclature Name	Functional Names
TNFSF1	TNF- $\beta$ , Lymphotoxin- $\alpha$ (LT- $\alpha$ ), TNFSF1B
TNFSF2	TNF- $\alpha$ , Cachectin, DIF, Necrostatin, Cytotoxin, TNFSF1A
TNFSF3	Lymphotoxin- $\beta$ (LT- $\beta$ ), TNF-C
TNFSF4	OX40 Ligand (OX40L), Gp34, TXGP1, CD252
TNFSF5	CD40 Ligand (CD40L), TRAP, Gp39, CD154, T-BAM
TNFSF6	Fas Ligand (FasL), APTL, APT1LG1, CD95L, CD178
TNFSF7	CD70, CD27 Ligand (CD27L, CD27LG)
TNFSF8	CD30 Ligand (CD30L, CD30LG), CD153
TNFSF9	4-1BB Ligand (4-1BBL), CD137L
TNFSF10	TRAIL, Apo2 Ligand (Apo2L), CD253
TNFSF11	RANK Ligand (RANKL), TRANCE, OPGL, ODF, CD254
TNFSF12	TWEAK, Apo3 Ligand (Apo3L), DR3LG
TNFSF13	APRIL, TALL-2, TRDL-1, CD256
TNFSF13B	BAFF, BLyS, TALL-1, CD257, TNFSF20, THANK, ZTNF4
TNFSF14	LIGHT, HVEM-Ligand (HVEM-L), CD258
TNFSF15	TL1A, TL1, VEGI
TNFSF18	AITR Ligand (AITRL), TL-6, GITR Ligand (GITRL)

## TNF Superfamily – Receptors

Nomenclature Name	Functional Names
TNFRSF1A	TNF Receptor Type I (TNFR1), CD120a, p55, p60, TNFAR
TNFRSF1B	TNF Receptor Type II (TNFR2), CD120b, p75, p80
TNFRSF3	TNF Receptor Type III (TNFR3), Lymphotoxin- $\beta$ Receptor, TNFR2-RP, TNFCR
TNFRSF4	OX40L Receptor, ACT35, TXGP1R, CD134
TNFRSF5	Bp50, CD40L Receptor, CDw40, CD40
TNFRSF6	FASLG Receptor, CD95, Apo-1
TNFRSF6B	DcR3, M68
TNFRSF7	CD27, CD27L Receptor, T14
TNFRSF8	CD30, CD30L Receptor, Ki-1
TNFRSF9	4-1BBL Receptor, CDw137, CD137, T-cell antigen ILA
TNFRSF10A	DR4, Apo2, TRAIL Receptor 1 (TRAILR1), CD261
TNFRSF10B	DR5, TRAIL Receptor 2 (TRAILR2), CD262, KILLER, TRICK2A, TRICKB
TNFRSF10C	DcR1, TRAIL Receptor 3 (TRAILR3), CD263
TNFRSF10D	DcR2, TRAIL Receptor 4 (TRAILR4), CD264
TNFRSF11A	RANK Receptor (RANKR), ODFR, CD265, ODAR, TRANCE Receptor
TNFRSF11B	Osteoprotegerin (OPG), OCIF, TR1
TNFRSF12	DR3, TNFRSF25, Apo3, AIR, TRAMP, LARD, WSL, WSL-1
TNFRSF13B	TACI, CD267
TNFRSF13C	BAFF Receptor (BAFFR), CD268, BLyS Receptor 3
TNFRSF14	HVEM, TR2, HveA, CD270, ATAR
TNFRSF16	NGF Receptor (NGFR), Gp80-LNGFR, p75NTR, p75 ICD, CD271
TNFRSF17	BCMA, CD269
TNFRSF18	AITR, GITR, CD357
TNFRSF19	TRADE
TNFRSF19L	RELT
TNFRSF21	DR6, CD358
TNFRSF22	SOBa, TNFRH2
TNFRSF23	SO, TNFRH1



# VEGF/PDGF Family

Functional Name	Synonyms	Expression (Partial List)	Function	Receptors (Selected List)
<b>VEGF-A<sub>121</sub></b>	Vascular Permeability Factor (VPF)	All vascularized tissues	Angiogenesis, induces endothelial cell proliferation, and cell migration, osteoclastogenesis	VEGFR-1,-2
<b>VEGF-A<sub>145</sub></b>	Vascular Permeability Factor (VPF)	All vascularized tissues	Angiogenesis, induces endothelial cell proliferation, vasculogenesis, permeabilization of blood vessels, osteoclastogenesis	VEGFR-1,-2, HSPG, Neuropilin-1
<b>VEGF-A<sub>165</sub></b>	Vascular Permeability Factor (VPF)	All vascularized tissues	Angiogenesis, induces endothelial cell proliferation, vasculogenesis, permeabilization of blood vessels, osteoclastogenesis	VEGFR-1,-2, HSPG, Neuropilin-1,-2
<b>VEGF-A<sub>189</sub></b>	Vascular Permeability Factor (VPF)	All vascularized tissues	Angiogenesis, induces endothelial cell proliferation, migration	HSPG, Neuropilin-1,-2
<b>VEGF-A<sub>206</sub></b>	Vascular Permeability Factor (VPF)	All vascularized tissues	Not determined at time of printing	HSPG, Neuropilin-1,-2
<b>VEGF-B<sub>187</sub></b>	VEGF-Related Factor (VRF)	Heart, skeletal muscle, vascular smooth muscle cells	Embryonic angiogenesis	VEGFR-1, Neuropilin-1
<b>VEGF-B<sub>186</sub></b>	VEGF-Related Factor (VRF)	Heart, skeletal muscle, vascular smooth muscle cells	Embryonic angiogenesis	VEGFR-1, Neuropilin-2
<b>VEGF-C</b>	VEGF-2, Vascular Endothelial Growth Factor Related protein (VRP), Flt4-Ligand	Neuroendocrine organs, lung, heart, kidney, vascular smooth muscle cells	Lymphangiogenesis and tumor angiogenesis	VEGFR-2,-3, Neuropilin-2
<b>VEGF-D</b>	c-Fos Induced Growth Factor (FIGF)	Neuroendocrine organs, lung, heart, skeletal muscle, small intestine, vascular smooth muscle cells	Lymphangiogenesis and tumor angiogenesis	VEGFR-2,-3
<b>VEGF-E (Orf Virus)</b>	None	Virus-derived	Induces endothelial proliferation, vascular permeability, angiogenesis	VEGFR-2, Neuropilin-1 (binds NZ2-VEGF-E variant)
<b>VEGF-F (Snake venom)</b>	None	Snake venom	Induces endothelial proliferation, vascular permeability, angiogenesis	VEGFR-2
<b>PIGF-1</b>	Placenta Growth Factor-1, PGFL, PGF, PIGF	Placenta, thyroid, lung, goiter	Angiogenesis, chemotactic towards monocytes, wound healing and tumor formation	VEGFR-1
<b>PIGF-2</b>	Placenta Growth Factor-2, PGFL	Placenta, thyroid, lung, goiter	Angiogenesis, chemotactic towards monocytes, wound healing and tumor formation	VEGFR-1, Neuropilin-1, Neuropilin-2
<b>PIGF-3</b>	Placenta Growth Factor-3, PGFL	Placenta	Angiogenesis, chemotactic towards monocytes, wound healing and tumor formation	VEGFR-1
<b>PIGF-4</b>	Placenta Growth Factor-4, PGFL	Placenta, thyroid, lung, goiter	Angiogenesis, chemotactic towards monocytes, wound healing and tumor formation	VEGFR-1
<b>PDGF-AA</b>	Glioma-Derived Growth Factor (GDGF), Osteosarcoma-Derived Growth Factor (ODGF)	$\alpha$ -granules, released upon platelet activation	Mitogenic factor, hyperplasia, cell migration, embryonic neuron development, angiogenesis	PDGFR- $\alpha$
<b>PDGF-BB</b>	Glioma-Derived Growth Factor (GDGF), Osteosarcoma-Derived Growth Factor (ODGF)	Heart, brain (substantia nigra), placenta, fetal kidney	Mitogenic factor, hyperplasia, cell migration, embryonic neuron development, angiogenesis	PDGFR- $\alpha$ , PDGFR- $\beta$
<b>PDGF-AB</b>	Glioma-Derived Growth Factor (GDGF), Osteosarcoma-Derived Growth Factor (ODGF)	$\alpha$ -granules, released upon platelet activation	Mitogenic factor, hyperplasia, cell migration, embryonic neuron development, angiogenesis	PDGFR- $\alpha$ , PDGFR- $\beta$
<b>PDGF-CC</b>	Fallotein, Spinal Cord-Derived Growth Factor (SCDGF)	Retinal pigment epithelia, fallopian tube, vascular smooth muscle cells in kidney, platelets, prostate, testis, uterus	Mitogenic factor, hyperplasia, cell migration, embryonic development, angiogenesis	PDGFR- $\alpha$
<b>PDGF-DD</b>	Iris-Expressed Growth Factor (IEGF), Spinal Cord-Derived Growth Factor-B (SCDGF-B)	Heart, pancreas, adrenal gland, ovary, placenta, liver, kidney, prostate, testis, small intestine	Mitogenic factor, hyperplasia, cell migration, embryonic development, angiogenesis	PDGFR- $\beta$



## Antagonists of TGF- $\beta$ Ligands

Natural TGF- $\beta$ Antagonists	Structural Features Contained in the Antagonist Polypeptide (M.W.)	Known TGF- $\beta$ Binding Partners
Noggin	unique Noggin cysteine knot (26 kDa)	BMP-2, -4, -5, -6, -7, -13/GDF-6, -14/GDF-5
Chordin	4 CR/VWCC (Chordin) domains, 3 SOG repeats (102 kDa)	BMP-2, -4, -7
Chordin-like/Neuralin/Ventropin	3 Chordin domains (51 kDa)	BMP-4, -5, -6
Follistatin	3 cysteine-rich Follistatin (FS) and 3 kazal domains (38 kDa)	Activin, BMP-2, -4, -6, -7, Myostatin/GDF-8, GDF-11, TGF- $\beta$ 1
Follistatin-like related gene (FLRG)	2 FS and 2 kazal domains (28 kDa)	Activin, BMP-6, -7, -11, Myostatin/GDF-8, GDF-11, TGF- $\beta$ 1
GASP-1	1 Wap, 1 FS, 1 kazal, 1 IG-like, 2 kunitz, 1 netrin domains (63 kDa)	Myostatin/GDF-8, GDF-11, Activin, BMP-11
Follistatin-related protein (FSRP)	1 FS, 1 CR/VWRC, 2 EF-hand domains (35 kDa)	Activin, BMP-2, -6, -7
DAN	unique DAN cysteine knot (19 kDa)	BMP-2, -4, -7, -14/GDF-5
Cerberus	DAN-like cysteine knot (30 kDa)	BMP-2, -4, -7, Activin, Nodal
Gremlin	DAN-like cysteine knot (21 kDa)	BMP-2, -4, -7
Sclerostin/SOST	unique Sclerostin cysteine knot (24 kDa)	BMP-5, -6, -7
Decorin	multiple leucine-rich repeats (40 kDa)	TGF- $\beta$ 1, - $\beta$ 2
alpha-2 macroglobulin	multiple proteinase inhibitor domains (163 kDa)	TGF- $\beta$ 1, - $\beta$ 2, Activin, Inhibin

## General Characteristics of Plasma Lipoproteins

LP Particle	Size	Density (g/ml)*	TG/CE Ratio*	L/P Ratio*	Associated Apoproteins
CM	1000nm	<0.95	28.83	65.66	<b>ApoB-48</b> , ApoA, ApoC, ApoE, ApoH
VLDL	70nm	0.98	3.89	10.76	<b>ApoE</b> , ApoB-100, ApoC
IDL	40nm	1.01	0.82	8.09	<b>ApoE</b> , ApoB-100, ApoC
LDL	20nm	1.04	0.18	3.76	<b>ApoB-100</b> , ApoC, ApoE, Apo(a)
HDL	10nm	1.13	0.16	1.22	<b>ApoA-I</b> , ApoC, ApoD, ApoE

LEGEND: \* Average values, TG-triglycerides, CE-cholesteryl esters, L/P- lipid/protein, **Bold** represents the major apoprotein

## Classification of Apoproteins

Apoprotein	MW	Function and Comments
ApoA-I	29 kDa	Major protein of HDL, activates LCAT, high levels of ApoA-I are associated with a reduced risk of CHD.
ApoA-II	17.4 kDa	Primarily in HDL, inhibits hepatic lipase activity.
ApoA-IV	46 kDa	Present in fat-rich LPs.
ApoB-48	246 kDa	Derived from ApoB-100 gene by RNA editing, found exclusively in CMs, lack the LDLR binding domain of ApoB-100.
ApoB-100	513 kDa	Major protein of LDL, binds to LDLR, high levels of ApoB-100 are associated with an increased risk of CAD.
ApoC-I	7.6 kDa	Appears to be involved in activation of LCAT.
ApoC-II	8.9 kDa	Activates LPL, deficiency of ApoC-II results in accumulation of CMs and high TG levels.
ApoC-III	8.75 kDa	Inhibits LPL.
ApoD	33 kDa	Found only in HDL, closely associated with LCAT.
ApoE	34 kDa	Three known ApoE alleles (E2, E3, E4). Binds to LDLR, inhibits development of atherosclerosis, ApoE4 is associated with late-onset Alzheimer's disease.

Note: Tables found on pages 136-144 are reflective of current knowledge.

# General Abbreviations

AA (aa)	Amino Acid
AAP	Antigen-Affinity Purified
ABTS	azino-diethylbenzothiazoline-sulfonate
AEC	3-amino-9-ethylcarbazole
AP	Alkaline Phosphatase
AR	Antigen Retrieval
bME	beta-Mercaptoethanol
BSA	Bovine Serum Albumin
Bt	Biotinylated
CHO	Chinese Hamster Ovary (cells)
ConA	Concanavalin A
Da	Daltons
DAB	3,3' Diaminobenzidine
DI	Deionized
DMEM	Dulbecco's Modified Eagle's Medium
DMSO	Dimethyl Sulfoxide
DTT	Dithiothreitol
ECM	Extra Cellular Matrix
ED <sub>50</sub>	50% Effective Dose
EDK	ELISA Development Kit
EIA	Enzyme Immunoassay
EIER	Enzyme-Induced Epitope Retrieval
ELISA	Enzyme-Linked Immunosorbent Assay
ESC	Embryonic Stem Cells
EU	Endotoxin Unit
FACS	Fluorescence-Activated Cell Sorter
FBS	Fetal Bovine Serum
FCS	Fetal Calf Serum
FFPE	Formalin-Fixed Paraffin-Embedded
FLISA	Fluorescence-linked Immunosorbent Assay
Gt	Goat
HCl	Hydrochloric Acid
HEK293	Human Embryonic Kidney Cells
HIER	Heat-Induced Epitope Retrieval
HoAc	Acetic Acid
HPLC	High-Performance Liquid Chromatography
HRP	Horseradish Peroxidase
HSA	Human Serum Albumin
HSC	Hematopoietic Stem Cells

HUVEC	Human Umbilical Venous Endothelial Cells
ICC	Immunocytochemistry
IgG	Immunoglobulin G
IgE	Immunoglobulin E
IHC	Immunohistochemistry
IU	International Unit
kDa	kilodaltons
LAL	Limulus Amoebocyte Lysate assay
LPS	Lipopolysaccharide
MAb	Monoclonal Antibody
MW	Molecular Weight
MSC	Mesenchymal Stem Cells
NaP	Sodium Phosphate (NaPO <sub>4</sub> )
NFDM	Nonfat Dry Milk
NKC	Natural Killer Cells
NM	Nitrocellulose Membrane
NSC	Neural Stem Cells
O.D.	Optical Density
PAb	Polyclonal Antibody
PAGE	Polyacrylamide Gel Electrophoresis
PCR	Polymerase Chain Reaction
PBL	Peripheral Blood Lymphocytes
PBS	Phosphate Buffered Saline
PBST	PBS with 0.1% TWEEN-20
PBMC	Peripheral Blood Mononuclear Cells
PHA	Phytohemagglutinin
pI	Isoelectric Point
PIER	Protease-Induced Epitope Retrieval
Rb	Rabbit
RIA	Radioimmunoassay
RT	Room Temperature
SDS	Safety Data Sheet
SDS	Sodium Dodecyl Sulfate
TBS	Tris Buffered Saline
TFA	Trifluoroacetic Acid
TMB	3,3',5,5'-tetramethylbenzidine
WB	Western Blot
WFI	Water Force Injection
WHO	World Health Organization

## RUO Cytokine FAQ

The relevant information relating to each product appears on the Certificate of Analysis (CoA) that is shipped with the product. Please read this information carefully to obtain instructions for reconstitution and storage. If, after reading the CoA, you need additional information, please review the following set of questions and answers, or call our Quality Assurance Department at [QualityAssurance@PeproTech.com](mailto:QualityAssurance@PeproTech.com) or 800-436-9910 prompt number 4.

### 1. What should I know about the stability of your protein products?

Unless otherwise mentioned on the product information sheet, all of our products are formulated in such a manner that the lyophilized proteins are very stable at room temperature. However, we recommend storing lyophilized products at -20°C to -80°C.

For reconstituted solutions of most products, we recommend short-term storage at 4°C. For extended storage, the protein solution should be stored with a carrier protein (e.g. 0.1% BSA) in working aliquots and stored at -20°C to -80°C. Aliquots should be prepared to a concentration no lower than 1µg/ml, and contain at least 10µl, independent of concentration.

Please keep in mind that every freeze/thaw cycle may cause some denaturation of the protein; therefore, we do not recommend subjecting aliquots to more than a single freeze/thaw cycle.

### 2. What endotoxin level should be expected when purchasing PeproTech proteins?

For most of PeproTech's Animal-Free proteins, the endotoxin level is guaranteed to be less than 0.01 ng/µg of protein or 0.1 EU/µg. For most of PeproTech's non-Animal-Free proteins the endotoxin level is guaranteed to be less than 0.1 ng/µg of protein, or 1 EU/µg. However, for many proteins, the actual measured endotoxin values are consistently below this stated endotoxin level. Please contact our technical service department ([QualityAssurance@PeproTech.com](mailto:QualityAssurance@PeproTech.com)) for more information.

### 3. Why can't I see the protein pellet in the vial?

Unlike many protein products available on the market, PeproTech products are not formulated with carrier proteins or other additives (e.g., BSA, HSA, sucrose, etc.). As a result, the small amounts of protein can be deposited on the vial during lyophilization as a thin, and sometimes invisible, film. Before opening, we recommend centrifuging each vial in a microcentrifuge for 20-30 seconds to drive any protein that may be lodged in the cap or on the side to the bottom of the vial. Our quality control procedures assure that each vial contains the correct amount of product.

### 4. Which cytokines show cross-species activity?

With a few exceptions, most human cytokines are active on mouse cells. Many mouse cytokines are active on human cells, but may show lower specific activity than the corresponding human cytokine. The interferons, GM-CSF, IL-3, and IL-4 are known to be species-specific with very little, if any, activity on non-homologous cells. In contrast,

the FGFs and neurotrophins are very highly conserved and show excellent activity on cells of other animal species.

### 5. What is the relationship between the specific activity expressed as an ED<sub>50</sub> and as units/mg?

While ED<sub>50</sub> is defined as the cytokine concentration at which activity is 50% of the maximum response, specific activity is defined as a measurement of reaction rate (i.e. activity) in relation to the amount or mass of a substance. Specific Activity Units should only be used as a method of expressing potency and should only be calculated for sigmoidal dose-dependent curves. The formula for converting activity expressed as an ED<sub>50</sub> in ng/ml to specific activity in units/mg is:

$$\frac{1 \times 10^6}{\text{ED}_{50} \text{ (ng/ml)}} = \text{specific activity (units/mg)}$$

### 6. What is the relationship between specific activity units and International Units of activity?

There is no direct correlation or calculation between specific activity unit and International Unit (IU) values. International Units (IU) express a quantification of activity for the base amount of a substance in relation to an analogous reference standard with an internationally-accepted unit of biological potency (i.e. IU/ng) that has been assigned based on an International Collaborative Study conducted by the World Health Organization (WHO). WHO Reference Standards are made available by the National Institute for Biological Standards and Control (NIBSC). Intended to simplify the comparison of activity of a substance obtained from different sources, IU measurements can vary as comparison methods are rarely the same between sources. A true direct comparison requires standardized methods of analysis in order to guarantee comparability of the substance's activity in relation to its mass across sources.

### 7. How does PeproTech obtain International Units of activity?

Where possible, PeproTech obtains International Unit (IU) values through multiple side-by-side comparisons of our product(s) against the analogous WHO Reference Standard within our biological activity assay. Performing multiple comparison tests allows us to account for any outliers due to possible variations with the assay (e.g. product, handling, assay protocol, etc.). Using the results of these comparisons we can provide a reliable quantification of our product's activity in relation to the activity of the WHO Reference Standard.

## GMP Cytokine FAQ

### 1. Can I use PeproGMP® Cytokines for GMP manufacturing of investigational products, and for manufacturing commercial therapeutic products?

Yes, PeproGMP® Cytokines are intended for use in GMP manufacturing of investigational or marketed clinical products, such as cell therapy, gene therapy, tissue-engineered products, combination products, or other Advanced Therapy Medicinal Products.

PeproGMP® Cytokines are *not*, however, therapeutic products or excipients, and hence are not suitable for direct administration to humans. See USP Chapter <1043> Ancillary Materials for Cell, Gene, and Tissue-Engineered Products for more information, or contact PeproTech Technical Support.

### 2. What is the risk classification for PeproGMP® Cytokines?

PeproGMP® Cytokines are classified as Tier 2 under USP Chapter <1043>:

**Tier 1:** Low-risk, highly qualified materials (therapeutic drug or biologic, medical device).

**Tier 2:** Low-risk, well-characterized materials, produced in compliance with GMPs, and intended to be used as ancillary materials.

**Tier 3:** Moderate risk, not for use as ancillary materials.

**Tier 4:** High-risk materials

GMP Cytokine FAQ continued on next page...

## GMP Cytokine FAQ continued...

### 3. *Is the facility where PeproGMP® Cytokines are manufactured GMP certified by FDA? Has FDA inspected PeproTech? How would my QA department qualify PeproTech and PeproGMP® Cytokines?*

The US FDA does not perform inspections or GMP certification of manufacturing facilities for ancillary reagents. In some countries, the national regulatory authority does inspect and certify GMP manufacturing facilities for all types of products, but FDA GMP inspections are limited to manufacturing facilities for therapeutic products and medical devices.

PeproGMP® Cytokines are manufactured in accordance with relevant US GMPs, under a rigorous ISO 9001-compliant quality system. All aspects of manufacturing, testing, labeling, and packaging are stringently controlled, validated, and monitored by PeproTech QA. PeproTech provides detailed Certificates of Analysis and Certificates of Origin for all PeproGMP® product lines. SDS documents are also available.

### 4. *Are PeproGMP® Cytokines animal-origin free and human-origin free?*

Yes. Cytokines in the PeproGMP® line are manufactured using defined media, enzymes, and chemicals, none of which are derived from animal or human origin.

### 5. *Do PeproGMP® Cytokines have the same biological properties as the PeproTech research-grade/animal-free grade cytokines I have been using for R&D studies?*

Yes. PeproGMP® Cytokines are functionally equivalent to their research-grade counterparts.

### 6. *How are PeproGMP® Cytokines shipped?*

The products are lyophilized, making them stable at a wide range of temperatures. Shipping is at ambient temperature. Upon request and at an additional cost, these products can be shipped on ice packs or dry ice.

## Serum-Free Cell Culture Supplement Kit FAQ

### 1. *What is chemically-defined, serum-free media?*

Chemically-defined media include only components of known molecular structures and concentrations.

### 2. *What are the advantages of using chemically-defined, serum-free media?*

The advantages include: lot-to-lot consistency and reproducible cell growth, greater protein yield (for protein production applications) vs. using serum, consistent media performance, lowered risk of contamination with viral and other adventitious infectious agents, reduced downstream purification challenges (for protein production applications), elimination of the need to prescreen serum lots, and simplification of any regulatory or other documentation requirements.

### 3. *Is PeproTech's PeproGrow-1 Serum-Free Cell Culture Media Supplement Kit (catalog number 700-C100) protein-free?*

Yes, PeproTech's Serum-Free Cell Culture Supplement kit is protein-free, as well as animal-free.

### 4. *Can you provide the certifications for these animal-free components?*

Yes, please contact our Quality Assurance Department (QualityAssurance@PeproTech.com) for more information.

### 5. *Where can I find formulations for components of this kit?*

Formulations for the kit and its components are proprietary to PeproTech, Inc.

### 6. *Can I use DMEM instead of DMEM/F12?*

DMEM/F12 medium contains much more nutrition than DMEM alone as it is a mixture of half DMEM and half F12 medium. Since PeproTech has not tested DMEM at this time, it is recommended that DMEM/F12 be used with PeproTech's PeproGrow-1 Serum-Free Cell Culture Supplement Kit.

## PeproGrow™ hESC FAQ

### 1. *What are the formulations of the PeproGrow™ hESC Media Products?*

The serum- and phenol red-free, complete, chemically-defined formulations of PeproTech's PeproGrow™ hESC Media Products are proprietary. Designed and developed by PeproTech in collaboration with the Stem Cell Training Course at Rutgers University, each PeproGrow™ hESC Media Kit includes a bottle of basal medium and a separate, lyophilized component of PeproTech's recombinant growth factors.

### 2. *How should each PeproGrow™ hESC Media Kit component be stored?*

The basal media can be stored in the dark at 2°C to 8°C for up to 6 months. The lyophilized growth factor component can either be stored at 2°C to 8°C for up to 6 months, or -20°C to -80°C for up to five years.

### 3. *How should the PeproGrow™ hESC Medium be prepared for use?*

Centrifuge the vial of lyophilized growth factor component prior to opening, and reconstitute with sterile, cell culture grade water (using either 500µL of water for 500mL-size Media Kits, or 100µL of water for 100mL-size Media Kits). For use within two weeks, aseptically add the entire reconstituted growth factor component to the basal medium and mix well by swirling or pipetting. Otherwise, aseptically transfer the necessary volume of basal medium into a sterile polycarbonate bottle or conical-bottom polypropylene tube, aseptically add the necessary proportion of reconstituted growth factor component and mix well by swirling. Filtration is not necessary when prepared aseptically. Label with the date of mixture and newly calculated expiration date (2 weeks from date of mixture). Store in the dark at 2°C to 8°C until needed, and only warm the amount of media needed for each given feeding.

PeproGrow™ hESC FAQ continued on next page...

# PeproGrow™ hESC FAQ continued...

## 4. Are accommodation protocols necessary when switching from my current medium to a PeproGrow™ hESC Medium?

Accommodation protocols are not necessary when switching from one insulin-inclusive formulation to another, but may be necessary to avoid issue when switching from an insulin-inclusive formulation to an insulin-free formulation. Accommodation requirement can also depend on cell type. When an acute method (no accommodation) does not function as expected, then additional accommodation protocols (e.g. short or long) may be used. Where accommodation protocols do not function as expected, then a long accommodation can be used in combination with a gradually increasing percentage of new medium (e.g. 100:0, 80:20, 60:40, 20:80, 0:100). Please refer to the PeproGrow™ hESC Medium Instruction Manual for additional information.

## 5. Is differentiation common during adaptation protocols?

Some amount of differentiation is expected with both acute and accommodation methods. Differentiated colonies can either be scraped from the culture, or non-differentiated colonies can be transferred onto newly-coated cell culture dishes. Please refer to the PeproGrow™ hESC Medium Instruction Manual for additional information.

## 6. Will cultures change in PeproGrow™ hESC medium?

While exact changes cannot be predicted for all applications, some changes in colony morphology (e.g. cell flattening with PeproGrow™ hESC Medium) are possible. Changes in pluripotency and cell phenotype have not been observed. Colonies in adapted cultures may tend to become more elastic and resilient to passaging. Please refer to the PeproGrow™ hESC Medium Instruction Manual for additional information. Routine laboratory protocols can be followed where no changes are observed.

## 7. Should cells be cultured on coated or uncoated cultureware?

Culturing on uncoated plastic is not recommended. Corning Matrigel® is recommended as an extracellular matrix (ECM) during initial adaptations; however, other suitable ECM products can be used thereafter. Specifically formulated for use as a cell culture surface-coating reagent for our stem cell media products, PeproTech's Animal-Free Recombinant Human Vitronectin Matrix and Buffer Kit (catalog number AF-VMB-220) can be used following either a surface-coating or premix method.

## 8. Why are cells attaching poorly after enzymatic passaging?

This is more than likely the results of over-digestion; however, if some colonies have attached, cultures can continue to be fed, as some cells will grow robustly after 4-6 days and cultures can be maintained from 2-4 colonies. Over-digestion can be avoided by using non-enzymatic passaging methods. Note: Enzymatic methods should not be used during cell culture steps with Animal-Free Human Vitronectin Matrix-coated cultureware. PeproTech's osmotically-compatible Cell Passaging/Non-Enzymatic Detachment Buffer (catalog number CPD-125), which only contains PBS, HEPES, and EDTA, should be used instead.

## 9. Can a reagent be added to my culture if the cells have not attached well after enzymatic passaging?

The addition of 2-10 µM (preferably 2 µM) Y-27632, or a ROCK inhibitor, has been shown to enhance cellular survival and attachment during enzymatic passaging (when using either dispase or Accutase™). Increased amounts of Y-27632 have been shown to cause neural differentiation, in addition to morphological changes that have been shown to be reversible.

## 10. Are there any additional recommendations for passaging the cells?

Additional recommendations have been included below; however, please also refer to the PeproGrow™ hESC Medium Instructions Manual.

- Appropriate timing is the most difficult part of the passaging method as it is extremely important to avoid the over-digestion of the colonies with dispase, since this can prevent colonies from attaching, or cause them to fold in on themselves upon attaching.

- After 5-7 days the colony will most likely be large enough to passage.

- Some cell death is normal. When passaging using the dispase method you can expect some percentage of cells not to attach, but if you get less than 50% viability, then the cells have been passaged too roughly. The PBS/EDTA method is gentler and leads to better recovery if cells are passaged correctly.

## 11. Do you have any additional recommendations for the timing of passaging the cells?

The timing of the passaging is a critical step. Cells that are passaged too early will plate poorly since the colonies will be too small and will not survive the passaging technique. Also, it is important to avoid overexposure to collagenase. We recommend using dispase or PBS/EDTA. Both are optimal at 5 minutes, but you should observe the cells at 3 minutes for both methods to determine if the full 5 minutes is needed.

## 12. How does cell density affect the colony growth?

If the cells are too sparsely, or too densely, populated, then this can lead to differentiation. If the split ratio is too high, then the cells will not have enough autocrine factors to enhance viability and many cells will die and/or differentiate. We recommend starting with a near confluent dish and trying a 1:6, 1:12, or 1:18 split using dispase, or a 1:6, 1:12, 1:18, or 1:24 split using a PBS/EDTA method. Further dilutions can be made if needed. We recommend adding Y27632 when using dispase at a low cell plating density, but this is not needed for a PBS/EDTA method.

## 13. How does spacing affect the cell density?

Spacing is arbitrary. When plating the cells we recommend that you transfer cells around the rim of the well (only for 6-well dish) and then gently move the dish back and forth to mix. For other sized dishes, disperse cells by moving the pipette as you add the cells.

## 14. Are there any specific recommendations for feeding the cells?

Feed the cells daily, with the exception of one "double volume" feed over the weekend.

## 15. Can I use matrices other than those recommended above to coat cell culture dishes?

Yes, we have tried several other coating reagents including: Laminin/Entactin (BD™), Recombinant Human Vitronectin (PeproTech; catalog number 140-09 and AF-140-09), and Synthemax II® (Corning). For the Laminin/Entactin, we observed nearly identical growth as compared to BD Matrigel™ on the standard cell culture plastics. For both the human Vitronectin and Synthemax II®, we recommend CellBIND® or an equivalent type of cell culture plastic for optimal binding of factors. We observed less spreading of colonies and slightly less robust attachment, and this method appears to require the addition of Y-27632 for additional time.

## Antigen Affinity Purification of Antibodies

Cytokines are signaling proteins necessary for cell-to-cell communication throughout the body. In accordance with their role in preserving vital biological functions, the amino acid sequence of homologous cytokines from different mammalian species is generally highly conserved, rendering them poor immunogens for antibody production.

Consequently, the sera obtained from host animals after immunization with cytokines (Figure I-1) typically contain minute amounts of cytokine-specific antibodies. Isolation of these antibodies by standard purification procedures (e.g. ion-exchange chromatography) is tedious and ineffective. On the other hand, purification protocols which exploit the binding affinity of antibodies to certain biomolecules have yielded much better results.

**Figure I-1 - General Immunization Schedule for Polyclonal Antibody Production in Rabbits**

Day	Procedure	Antiserum Collected
1	Prebleed	3ml
1	Initial Immunization (250ug)	-
21	Immunization (125ug)	-
31	Titer Test Bleed	3ml
42	Immunization (125ug)	-
49	Production Bleed	10-25ml
56	Production Bleed	10-25ml
63	Immunization (125ug)	-
70	Production Bleed	10-25ml
77	Production Bleed	10-25ml
84	Immunization (125ug)	-
91	Production Bleed	10-25ml
98	Production Bleed	10-25ml

For example, Protein A and Protein G are bacterial (*Staphylococcus*)-derived proteins that possess high binding affinity toward the Fc (Fragment crystallizable) region of immunoglobulins (IgGs), and when attached to a solid-support matrix, enable efficient separation of IgGs from other serum constituents. Protein A/G affinity purification of serum-IgGs typically enriches the desired antibody by more than 100-fold. Yet, in the case of anti-cytokine antibodies, the total IgG fraction often contains less than 0.2% of the desired antibody.

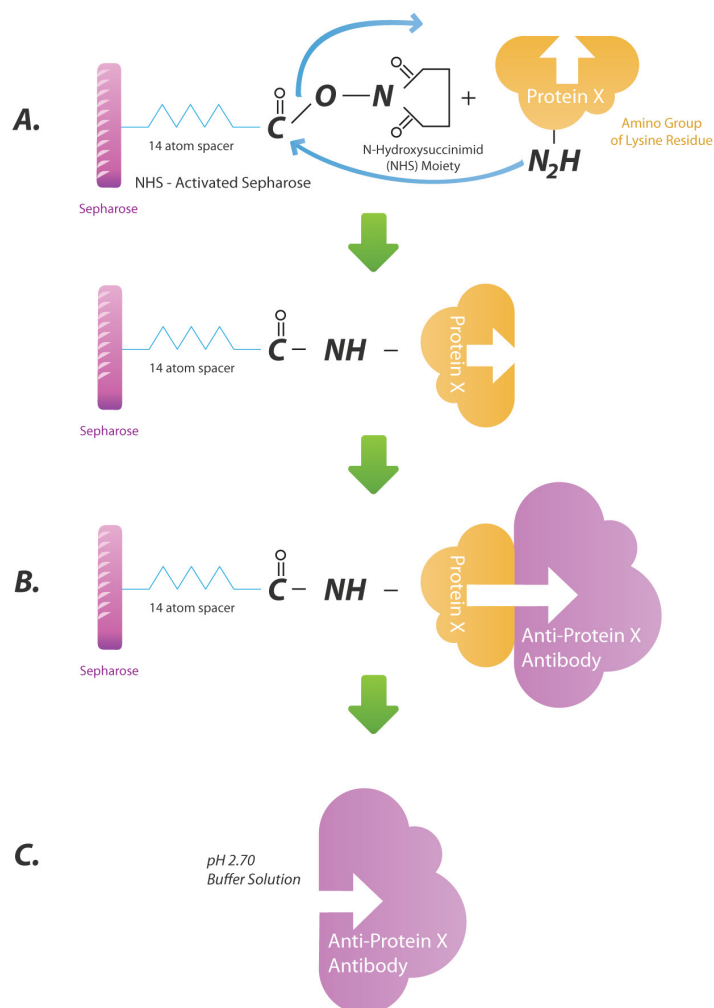
The large quantity of unrelated IgGs found in these preparations not only interferes with quantification of the relative amount of the cytokine-specific antibody, but also considerably increases the background noise when the antibody is used in analytical procedures such as ELISA, neutralization, immunohistochemistry, and Western blotting. A superior method for isolating specific polyclonal antibodies from antiserum is by affinity chromatography, which exploits the specificity of antibody-antigen interactions (Figure I-2).



# Antigen Affinity Purification of Antibodies continued...

**Figure I-2 -Antigen Affinity Purification of Antibodies**

(A.) Preparation of separation resin.  
(B.) Specific binding of Antibody to the resin.  
(C.) pH elution of the antibody from the affinity column.

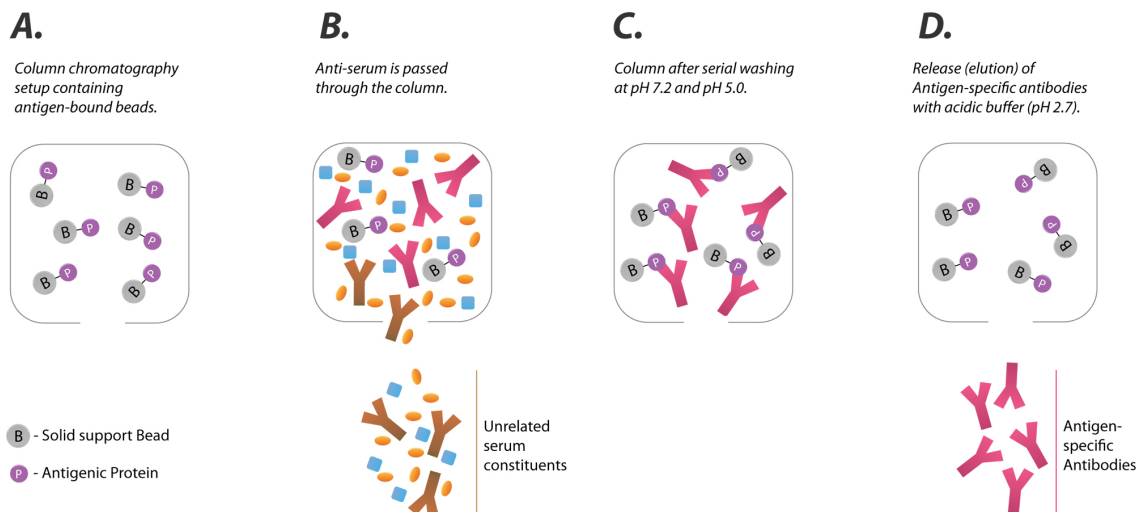


Here, the separation medium consists of a solid-support resin to which the antigen is attached through stable covalent bonds. The immobilized antigen is then used in a column chromatography setup to selectively capture antigen-specific antibodies, while other serum proteins and unrelated immunoglobulins are washed away (Figure I-3).

The antigen-bound antibodies can be eluted from the column by an acidic solution (Figure I-4), which is promptly brought back to physiological pH to prevent acid-catalyzed antibody denaturation. This method typically yields >95% pure specific antibodies (Figure I-5).

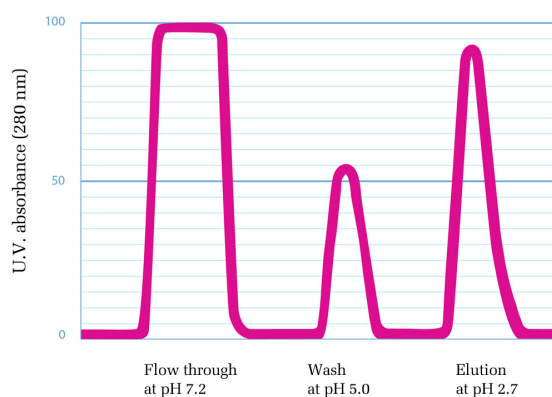
# Antigen Affinity Purification of Antibodies continued...

**Figure I-3** - Schematic illustration of column chromatography setup for antigen affinity purification of antibodies.



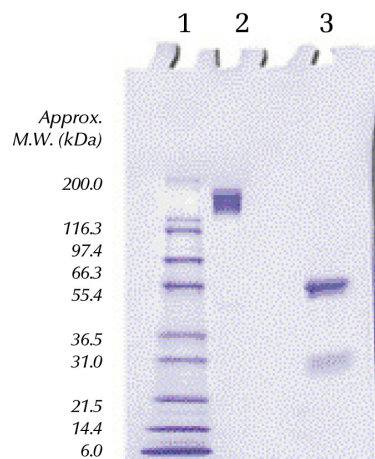
NOTE: Elution is titrated with 1M NaOH to pH 7.2.

**Figure I-4** -  
A Typical Antigen Affinity Purification Chromatogram



**Figure I-5** -  
SDS-PAGE analysis of Rabbit Anti-Human IL-8 polyclonal antibodies (RbahIL-8)

Lane 1: Molecular weight markers  
 Lane 2: 2µg of RbahIL-8 (unreduced)  
 Lane 3: 2µg of RbahIL-8 (reduced)





# Antibody FAQ

## 1. Does PeptoTech test for endotoxin in their antibodies?

PeptoTech does test their antibodies for endotoxin using the kinetic chromogenic LAL method. Please contact our Quality Assurance Department (QualityAssurance@PeptoTech.com) for more information.

## 2. Which isotype are PeptoTech's polyclonal antibodies?

The polyclonal antibodies that PeptoTech manufactures are IgG antibodies.

## 3. How are your antibodies purified?

All polyclonal and biotinylated polyclonal antibodies are antigen-affinity purified. Monoclonal antibody purification varies by product; please contact our Quality Assurance Department (QualityAssurance@PeptoTech.com) for more information.

## 4. Can you tell me what epitope your antibody binds to?

PeptoTech does not perform epitope mapping at this time. As a general guideline, a polyclonal mixture of antibodies will bind to multiple epitopes on the protein of interest while each monoclonal antibody will bind to a specific epitope.

## 5. Have PeptoTech's antibodies been tested in neutralization assays?

Neutralization testing is performed on a lot-to-lot basis for each antibody, when available. The results of this testing can be found on the product's corresponding data sheet.

## 6. Are PeptoTech's antibodies suitable for use in ELISA and Western Blot applications?

PeptoTech's antibodies are suitable for use in ELISA and Western Blot assays; please see our individual ELISA and Western Blot FAQ sections for more information regarding these applications.

## 7. What information should be known about the stability of your antibody products?

PeptoTech's antibodies are lyophilized from PBS. As such, they are stable at room temperature for at least 1 month. For longer periods, we recommend storing the lyophilized products at -20°C to -80°C.

For reconstituted solutions of the antibodies, we recommend short-term storage at 4°C. For long-term storage the antibody solution should first be aliquoted (to avoid more than one freeze/thaw cycle) and stored frozen at -20°C to -80°C. Frozen aliquots of this antibody solution are stable for at least 6 months when kept at -20°C to -80°C.

## 8. Do PeptoTech's antibody products contain any carrier proteins or other additives?

No, PeptoTech does not formulate its polyclonal, biotinylated polyclonal, or monoclonal antibodies with additives or carrier proteins.

## 9. Will PeptoTech's antibodies work in immunohistochemistry and immunocytochemistry applications?

All antibodies that have been tested so far have been found to be suitable for these applications. Please contact our Quality Assurance Department (QualityAssurance@PeptoTech.com) for more information.

## 10. Will PeptoTech's antibodies recognize target proteins sold by other vendors?

PeptoTech's antibody products have high binding affinity towards the natural and/or recombinant versions of the corresponding proteins. However, due to lack of authenticity sometimes found in other vendors' proteins, we cannot guarantee that our antibodies will perform as well with these proteins.

## 11. Will PeptoTech's antibodies recognize target protein in complex biological fluids such as blood or serum?

Yes. However, for samples that have a high content of interfering agents, the recognition will be less efficient and have a higher background, or reduced signal-to-noise ratio may be seen.

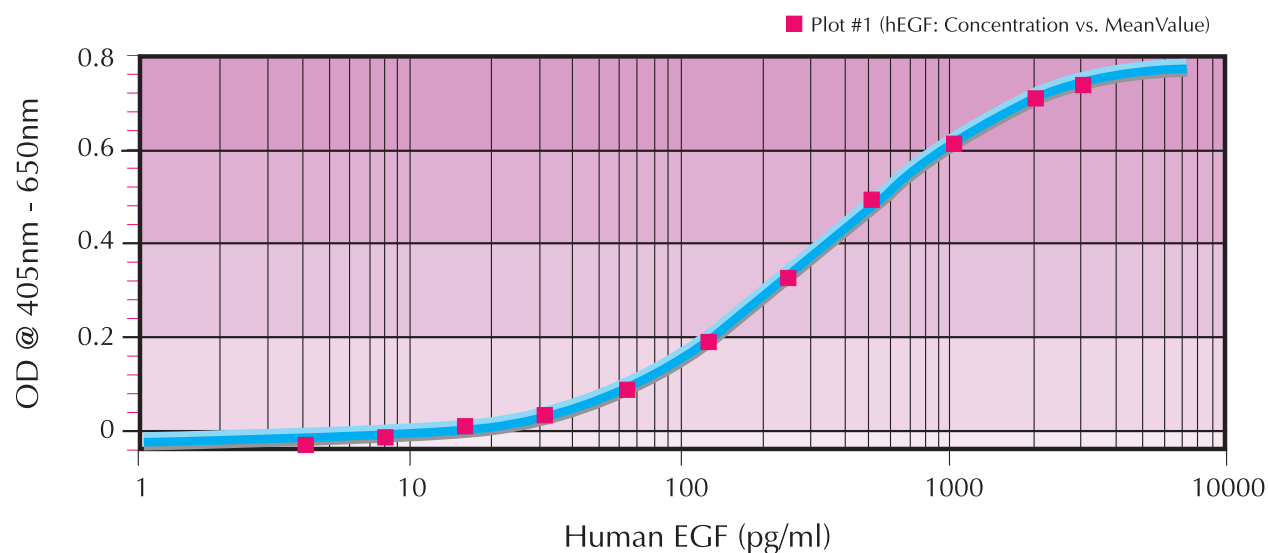
## ELISA

Enzyme-linked immunosorbent assay (ELISA) is a laboratory technique for quantifying the concentration of specific antigens or antibodies in cell lysates, sera, or other complex solutions. In its simplest format, called direct ELISA, a solid-phase binding support such as a polystyrene plate is used to capture the tested antigen, which is then detected with the aid of a specific enzyme-linked antibody (E-Ab). The detection protocol involves conversion of a colorless substrate solution into an intense, colored product that can be measured directly in the reaction plate. The increase in optical density during the reaction is recorded at different time points for several sample dilutions, and the collected data is then used in conjunction with a standard curve to calculate the concentration of the antigen in the original sample (Figure II-1). Although the sensitivity and specificity of ELISA are comparable to those of radioimmunoassay

(RIA), ELISA has the advantage of not requiring radioactive isotopes and expensive counting devices. In recent years, ELISA has gained popularity in both research and clinical laboratories, and has become an important diagnostic test for many infectious diseases, including the human immunodeficiency virus (HIV).

A number of different enzymes are suitable for the preparation of E-Abs, including alkaline phosphatase, horseradish peroxidase, and carbonic anhydrase. Although E-Abs can be obtained by covalently binding enzymes to antibodies through a coupling agent such as glutaraldehyde, this method is not commonly used, because it often yields products with impaired immunological and/or enzymatic activity. A superior method to prepare fully active E-Abs is by exploiting the high binding affinity of HRP-conjugate for biotin, as depicted in Figure II-2.

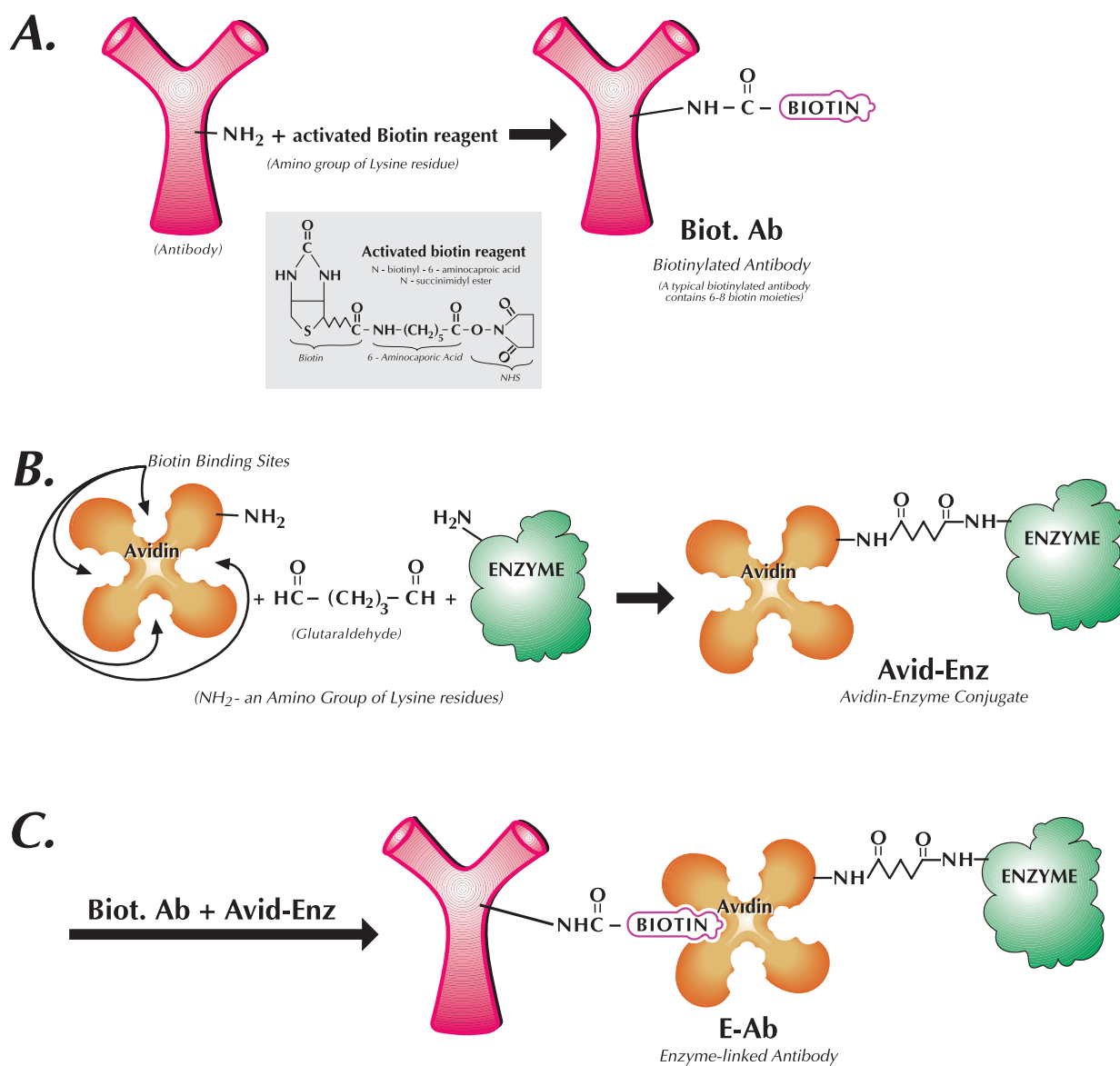
Figure II - 1 - Sample Standard Curve - Human EGF ABTS ELISA



## ELISA continued...

Figure II - 2 - Steps in the production of enzyme-linked antibody, through HRP-Biotin interaction.

(A.) Biotinylation of an Antibody. (B.) HRP-Enzyme Conjugation.  
(C.) *In Situ* formation of enzyme-linked Antibody via noncovalent interaction between Avidin and Biotin.



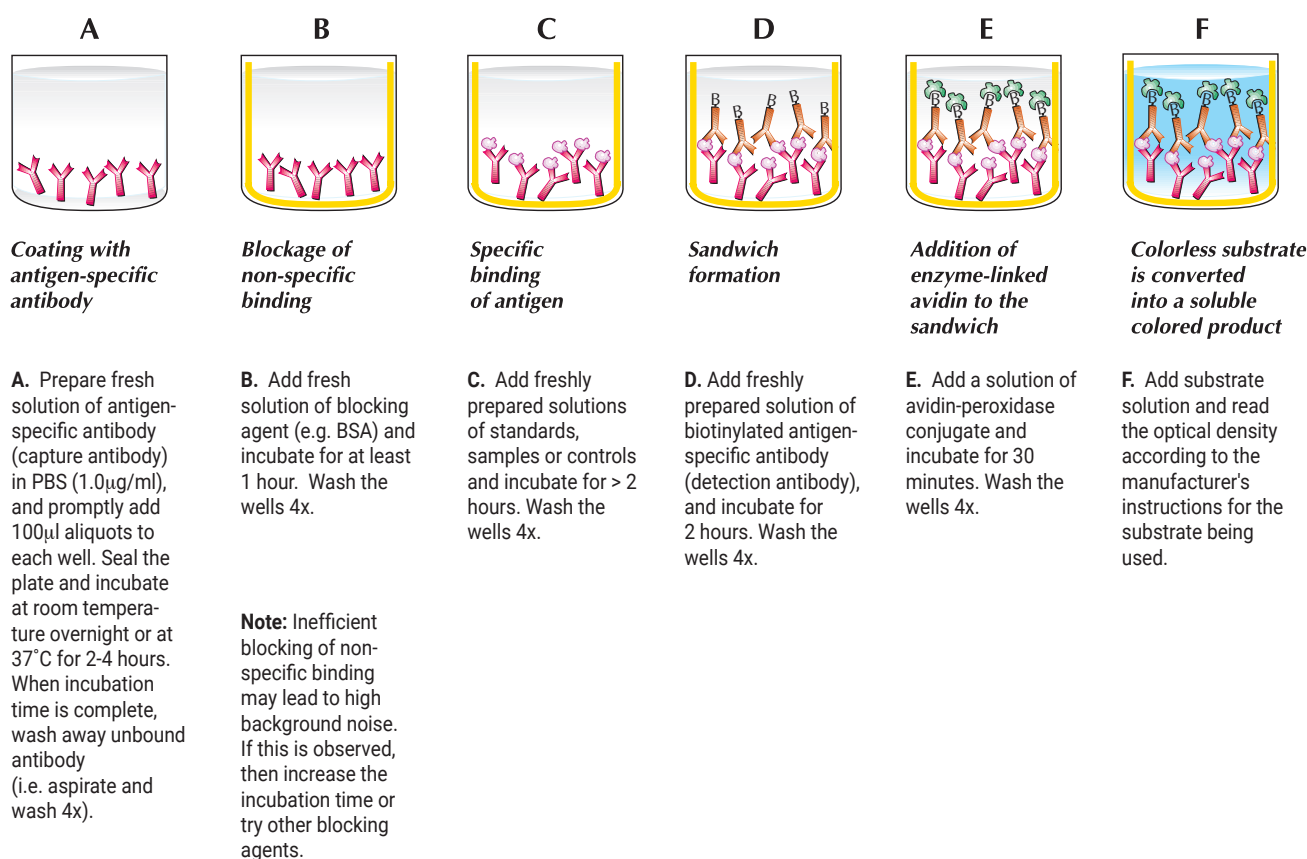
**Note:** Unless otherwise specified, the ELISA protocol is conducted at ambient temperature.

## ELISA continued...

The biotinylated antibody used in this method contains on average 6-8 biotin moieties, which due to their small size do not interfere with the interaction between the antibody and the captured antigen. Once unbound antibody has been rinsed from the plate, the biotin moieties are used *in-situ* to form stable complexes with avidin-enzyme conjugates. A major limitation of the direct ELISA format is that certain antigens (e.g. low molecular weight cytokines) bind poorly to polystyrene plates, and therefore, cannot be measured accurately by the

assay. To by-pass this limitation, the plate can be pre-coated with a specific antibody that recognizes the tested antigen through epitopes that are not used by the E-Ab. Using a matched pair of antigen-specific antibodies, one for capturing and one for detection, significantly improves both the sensitivity and specificity of the assay. This format, called Sandwich ELISA, enables detection of picogram quantities of antigens and is the preferred method for measuring cytokines and hormones in biological samples (Figure II-3).

Figure II - 3 - Schematic presentation of Sandwich ELISA protocol.



## ELISA Troubleshooting Guide

*When trouble shooting, prepare all fresh buffers. Sterile filter buffers containing BSA and allow all reagents to reach room temperature prior to use.*

Problem	Possible Source	Suggestion
<b>High Background/ Non-specific Color Development</b>	Non-specific binding of antibody	Modify blocking buffer used (e.g. substitute casein for BSA). Do not wash after blocking step; dump, blot & go directly to the next step.
	Plate not washed sufficiently	Be sure all wells are filled with buffer during every wash step. Be sure washing apparatus is working properly. Wash 3-5x between steps. Do not add additional washes. After final wash, blot plate forcefully on paper towel to remove residual buffer. Be sure the correct amount of Tween that was added to the wash solution (0.01-0.1% recommended).
	Contaminated Buffers	Prepare all buffers fresh (within 7 days of use) and sterile filter daily.
	Incubation temperature too high	Incubate at room temperature (25°C) throughout whole procedure.
	Incubation time too long	Reduce incubation time.
	Contamination of the substrate with the conjugate or contamination of blank wells with positive control	Change pipette tips between reagents and use separate reservoirs. Ideally, wash buffer should be aspirated (pouring/dumping may lead to cross contamination).
	Concentration of detection antibody or avidin-HRP/streptavidin-HRP is too high	Check calculations or try further dilutions.
	Substrate exposed to light prior to use	Keep substrate in the dark until ready to dispense into wells.
	Wrong filter used when taking readings	Wavelength should be 405nm with a 650nm wavelength correction for ABTS, or 450nm with a 620nm wavelength correction for TMB, when using recommended plates.
	Read beyond time needed for development	Read at recommended time or time intervals in order to monitor blank O.D. readings.
<b>Weak/No Color Development</b>	A reagent or a step of the procedure omitted by mistake	Check protocol and follow steps carefully.
	Detergent concentration in wash buffer too high	Remove or decrease detergent (0.01-0.1% recommended).
	Plate washed inadequately	Decrease number of washes between steps, especially if not using automated or semi-automated washer. 1-2 washes may suffice.
	Enzyme inhibitor present in samples	Sodium azide inhibits peroxidase activity.
	Wrong incubation time or temperature	Check and follow protocol recommendations. Place plates in an incubator during incubation periods to avoid temperature fluctuations (set to 25°C).
	Wrong substrate volume added to wells	Check pipette; use calibrated pipettes.
	Wrong enzyme-substrate system used	Check manufacturer specifications: avidin-HRP + ABTS or streptavidin-HRP + TMB.

# ELISA Troubleshooting Guide continued...

Problem	Possible Source	Suggestion
<b>Weak/No Color Development</b> (continued)	Conjugate or substrate inactive	Test activity in another system and check expiration dates.
	Incorrect storage of components	Store all components as recommended on data sheet.
	Wrong filter used when taking readings	Wavelength should be 405nm with a 650nm wavelength correction for ABTS, or 450nm with a 620nm wavelength correction for TMB, when using the recommended plates.
<b>Poor Standard Curve</b>	Incorrect preparation of standard	Reconstitute standard as suggested on data sheet. Dilute only with recommended diluent buffer unless alternative buffer has been optimized.
	Dilutions made too early	Prepare reagents immediately prior to use and add to wells promptly.
	Capture Antibody did not bind	Use ELISA-suitable plates (i.e. Nunc MaxiSorp Prod. # 439454 or Corning Prod. # 3590); not tissue culture plates.
	Inefficient washing	Be sure wash apparatus is working properly (i.e. distributing even volumes into each well). Be sure wells are empty after aspiration, yet be sure to fill wells in a timely manner.
	Pipetting error	Dispense quickly and identically into the side of each well. Use calibrated pipettes.
	Read beyond time needed for development	In general, reliable standard curves are obtained for ABTS Kits when O.D. readings do not exceed 0.2 for blanks or 1.2 for the highest standard concentration and for TMB Kits when O.D. readings do not exceed 0.15 for blanks.
	Incorrect storage of components	Store all components as recommended on data sheet. Do not allow reconstituted reagents to stay at room temperature for excess time.
<b>Poor Precision</b>	Insufficient mixing of reagents	Ensure adequate mixing of reagents before pipetting.
	Inefficient washing	Be sure wash apparatus is working properly (i.e. distributing even volumes into each well). Be sure wells are empty after aspiration, yet be sure to fill wells in a timely manner.
	Pipetting error	Dispense quickly and identically into the side of each well. Use calibrated pipettes.
	Reused materials	Change pipette tips between samples, reservoirs between reagents, and plate sealers between incubation periods.
	Wells have been scratched by pipette tips or washing apparatus	Use caution when dispensing and aspirating.
	Precipitate in samples	Centrifuge vials prior to use.
	Unclean wells or debris	Inspect wells and remove debris prior to use. Wipe bottom of plate to remove any debris or fingerprints prior to reading.
<b>Edge Effects</b>	Evaporation	Use plate sealers between each step.
	Uneven temperature	Place plates in an incubator during incubation periods to avoid temperature fluctuations (set to 25°C). Do not stack plates.

# ELISA FAQ

## 1. What are the stabilities of the HRP conjugates included in PeproTech's ELISA Development Kits?

The avidin-HRP included in the ABTS kits is stable for up to 1 month at 2-8°C, and up to 2 years at -20°C.

The streptavidin-HRP included in the TMB kit is stable for at least 6 months at 2-8°C.

## 2. How can I find cross-reactivity information for a kit?

PeproTech performs lot-specific, in-house cross-reactivity testing on its ELISA Development Kits. The results that have been collected from this testing are located on the kit's data sheet.

## 3. Is there any step of the ELISA protocol that can be left over the weekend?

The plate may be coated with the capture antibody on Friday, left at 4°C over the weekend, and resumed on Monday. Please note: changing incubation times may cause results to vary between plates.

## 4. Are PeproTech's EDKs suitable to use with all sample types?

Although PeproTech has not tested all of its kits in every matrix available, they should be suitable for use in, but not limited to: serum, plasma, cell culture supernatant, urine and saliva.

## 5. Is a stop solution necessary to stop the reaction?

A stop solution is not needed when using avidin-HRP + ABTS. In general, reliable standard curves are obtained when either O.D. readings do not exceed 0.2 units for the zero standard concentrations, or 1.2 units for the highest standard concentration. If a stop solution is desired, 1% sodium dodecyl sulfate (SDS) may be used to end the reaction. Stop solutions are not used in PeproTech's laboratory with ABTS EDKs.

A stop solution (1M HCl Stop Solution) is recommended with all of PeproTech's TMB kits.

## 6. In addition to the 620nm correction wavelength recommended for the TMB EDKs, can other wavelengths be used?

A correction wavelength of 540, 570, 620, or 650nm can be used with the TMB EDKs.

## 7. Can I use TMB with PeproTech's ABTS EDKs?

PeproTech's ABTS EDKs are optimized using ABTS and are, therefore, best used in conjunction with this substrate. The kit can still be used in combination with TMB, but only after some adjustments have been made:

- The avidin-HRP provided in the kit cannot be used with TMB; streptavidin must be purchased separately.
- Dilutions of streptavidin will need to be optimized.
- A stop solution is generally needed when using streptavidin + TMB. Refer to manufacturer's data sheet.
- The TMB reaction time, prior to the addition of stop solution, will need to be optimized.
- The plate is to be read at 450nm with a correction wavelength at 620nm when using recommended plates.

## 8. Why is D-mannitol added to the EDK components?

D-mannitol is added to the EDK components in order to aid in protein/antibody visualization. It does not alter ELISA results.

## 9. Can I use the curve on the EDK data sheet as my standard curve?

A separate standard curve must be run on each ELISA plate. In other words, the curve from one plate cannot be used for a different plate. The curve that PeproTech provides on the EDK data sheet is for demonstration purposes only, as achieved in PeproTech's laboratory.

## 10. How does PeproTech generate their standard curve?

When an ELISA is run in PeproTech's lab, a Molecular Devices® plate reader and the SOFTmax® PRO software are used. This program uses the values that are received and generates a 4-parameter curve. Here is the equation that the program uses:

$$y = \frac{A - D}{1 + \left(\frac{x}{C}\right)^B} + D$$

x = concentration (pg/ml)  
y = O.D. (405nm – 650nm)

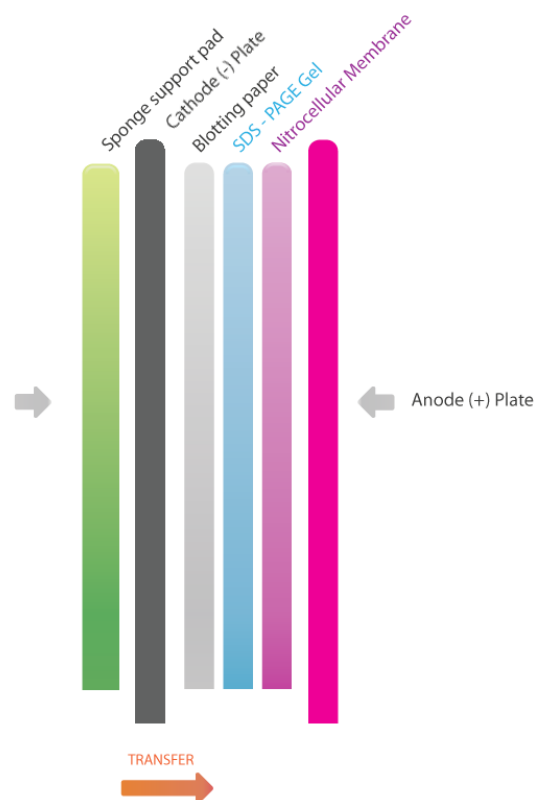
A, B, C, & D correspond to the 4 parameters.\*

\*For more detailed information regarding the parameters, please contact our Quality Assurance Department (QualityAssurance@peprotech.com).

# Western Transfer (Western Blot)

## iBlot2 Dry Blotting Transfer

1. Open lid of the iBlot2 device.
2. Using Kit #IB23001 (Thermo Fisher) unseal the Top & Bottom Stack. KEEP THE STACK IN THE PLASTIC TRAY. (One tray can fit two 4-20% Tris-Gly gels)
3. Place the Stack onto the iBlot2 transfer machine making sure the electrical contacts from the stack are aligned with the contact on the left side of the iBlot2 system.
4. Carefully remove the top portion from the stack that contains the Top Cathode portion and place it to the side.
5. Place the pre-run gels onto the transfer membrane making sure that the gel marker is facing toward you and use the Blotting Roller to remove all air bubbles.
6. Place the pre-soaked (in deionized water) iBlot Filter Paper onto the pre-run gels and remove air bubbles using the Blotting Roller.
7. Place the Cathode Stack over the pre-soaked Filter paper with the electrode side facing up and the gel side facing down. Remove air bubbles using the Blotting Roller.
8. Place the Absorbent Pad on top of the Cathode Stack with the metal contact on the left side making sure it aligns with the systems point of contact.
9. Close the lid. Touch P3 on the screen and then start and it will run for 7 minutes.
10. Once the iBlot2 beeps indicating that the cycle is complete, open the lid of the iBlot2 device.
11. Discard the Disposable Sponge and Cathode Stack .
12. Carefully remove and discard the filter paper. Use gels as a marker and cut the transfer membrane in half using a razor.
13. Discard gels and remove the transfer membrane from the stack. Discard the Anode stack after you removed the membranes for testing.
14. Incubate the membrane in blocking solution (10% Seablock for all antibodies) for 40 minutes with gentle agitation on an orbital shaker.
15. Wash the membrane three times with TBST (TBS, pH 7.2 with 0.1% TWEEN-20) in a clean tray on an orbital shaker; each wash lasting 5-10 minutes.
16. Dilute the probing (primary) antibody in TBST to a volume of 50ml (approximate final concentration of 0.20µg/ml) and incubate the membrane in the antibody solution for one to four hours at room temperature. (The optimum incubation time depends on the antibody/antigen binding affinity and must be pre-determined for each antibody.)
17. Wash the membrane three times as in step #15.





## Western Transfer (Western Blot) continued...

### iBlot2 Dry Blotting Transfer continued....

18. Dilute the secondary antibody in TBST according to the manufacturer's specification. Incubate the membrane in a clean tray containing 50ml of diluted secondary antibody for one hour at room temperature on an orbital shaker.
19. Wash the membrane three times as in step #15.
20. Color development requires the use of a commercially available (e.g. Bio-Rad or Sigma) alkaline phosphatase conjugate substrate kit. Follow the manufacturer's instructions.
21. After the bands become clearly visible, stop the color by placing the membrane in a tray containing diH<sub>2</sub>O for at least ten minutes.

#### Recommended Materials:

- SDS-PAGE apparatus and accessories
- iBlot2 Dry Blotting Transfer System
- iBlot2 NC Regular Stacks
- Seablock
- 1xTBST
- Antigen specific probing antibody (Primary Antibody)
- Secondary Antibody (Donkey-anti-probing antibody species conjugated to alkaline phosphatase)
- Commercially available alkaline phosphatase conjugate substrate kit

## Western Transfer FAQ

### 1. How long will the immunostaining take when PeproTech's Western Transfer protocol is followed?

The Western Transfer process will take approximately 6 hours from transfer of proteins to visualization of bands.

### 2. What type of molecular weight marker should be used?

PeproTech uses Novex® Sharp Pre-stained Protein Standard for use in all Western Transfers performed in-house, although this molecular weight marker does not have to be utilized. However, it is necessary that a pre-stained molecular weight marker is used when not utilizing the ECL detection method.

### 3. Is the addition of a positive control necessary in a Western Transfer?

Yes, in order to know exactly how the protein of interest will visualize on the Western Transfer you must add a positive control to your gel. When using PeproTech's antibodies in a Western Transfer, we recommend using the corresponding PeproTech recombinant protein, which was the immunizing antigen for the antibody of choice.

### 4. Is agitation of the membrane essential during the incubation periods?

Yes, it is essential that the membrane be agitated during the incubation periods. If the membrane is not agitated the antibodies, blocking buffer, and washing buffer may not affect the membrane evenly and can create splotchy, or patchy background. It can also limit the detection of the proteins by the antibodies.

### 5. Is it necessary to include the blotting paper during the protein transfer step?

Yes, it is necessary to include the blotting paper as a barrier in the protein transfer step, as it helps protect the gel and membrane from any possible damage resulting from direct contact with the sponges, yet does not interfere with the electric current.

### 6. Does the color development system recommended in PeproTech's Western Transfer protocol have to be used?

No. There are many different color development systems that can be used for the visualization of your Western Transfer. However, the system that is chosen must be compatible with the enzyme conjugate being used. PeproTech uses an alkaline phosphatase linked secondary antibody. NBT/BCIP is suitable for use with this enzyme, and is therefore used for the visualization of our Western Transfers.

### 7. Why are some Western Transfer results stronger than others when using different lots of the same antibody?

Due to the nature of polyclonal antibodies, variability may be seen from lot-to-lot.

### 8. Can an enzyme-conjugated primary antibody be used in a Western Transfer rather than using a primary/secondary antibody system?

Yes, an enzyme-conjugated primary antibody can be used instead of utilizing a primary/secondary antibody system in your Western Transfer. However, by using a labeled secondary antibody that recognizes the antigen-specific primary antibody, there will be an amplification of the signal seen in a Western Transfer when compared to using the enzyme-conjugated primary antibody alone.

# Western Transfer Troubleshooting Guide

Problem	Possible source	Suggestion
Weak/No Signal	Insufficient amount of protein present	<ul style="list-style-type: none"> <li>• Increase amount of protein in sample.</li> <li>• Confirm protein is present through an alternate method.</li> </ul>
	Gel ran too long	<ul style="list-style-type: none"> <li>• Decrease running time and monitor the gel by watching dye front and ensuring the current is turned off when dye front is near bottom of gel.</li> </ul>
	Old or degraded protein samples	<ul style="list-style-type: none"> <li>• Test a fresh sample of target protein.</li> </ul>
	Protein over-transferred/ did not transfer correctly	<ul style="list-style-type: none"> <li>• Use a membrane with a smaller pore size.</li> <li>• Decrease voltage for lower MW proteins (less than 10kDa).</li> <li>• Make sure membrane is pre-soaked according to manufacturer's instructions.</li> <li>• Check and optimize transfer time, as appropriate transfer time will vary with MW of the target protein.</li> <li>• Make sure transfer "sandwich" is set up correctly and there is sufficient contact between gel and membrane. (Please see our Western Transfer protocol for correct transfer "sandwich" set up.)</li> <li>• Ensure the correct transfer buffer is being used.</li> <li>• The presence of SDS during transfer can reduce the binding of the protein when using a nitrocellulose membrane.</li> <li>• Add 20% methanol to transfer buffer to increase binding.</li> <li>• Check protein transfer by staining the membrane with a reversible stain, such as Ponceau S, to visualize major bands.</li> </ul>
	Protein has a pI greater than 9	<ul style="list-style-type: none"> <li>• Substitute buffer with a higher pH buffer (i.e. CAPS buffer, pH 10.5).</li> </ul>
	Protein masked by blocking buffer	<ul style="list-style-type: none"> <li>• Test using a different blocking buffer.</li> <li>• Optimize concentration of protein in blocking buffer. We recommend 10% Seablock in diH<sub>2</sub>O.</li> </ul>
	Enzyme inhibitor present (i.e. azide)	<ul style="list-style-type: none"> <li>• Make sure buffers do not contain sodium azide, as this will interfere with the HRP signal.</li> </ul>
	Old or degraded primary antibody	<ul style="list-style-type: none"> <li>• Check manufacturer's recommendations for storage and/or expiration date. If expired or past storage time, purchase new antibody.</li> <li>• If antibody was subjected to repeated freeze/thaw cycles purchase new antibody, as this can affect the structure and protein:antibody binding.</li> <li>• Perform a Dot Blot to ensure antibody is still active.</li> </ul>
	Insufficient amount of primary and/or secondary antibody	<ul style="list-style-type: none"> <li>• Check manufacturer's recommendation for antibody concentration.</li> <li>• Test a range of concentrations to find the optimal condition for individual assay.</li> </ul>
	Incorrect primary antibody	<ul style="list-style-type: none"> <li>• Ensure primary antibody reacts with the target protein from the species being studied (i.e. Rabbit anti-human VEGF → Human VEGF).</li> </ul>

# Western Transfer Troubleshooting Guide *continued...*

Problem	Possible source	Suggestion
<b>Weak/No Signal</b> continued	Incorrect secondary antibody	<ul style="list-style-type: none"> <li>Ensure the secondary antibody being used is against the species of the primary antibody (i.e. Donkey anti-rabbit IgG → Rabbit anti-human VEGF).</li> </ul>
	Insufficient incubation of primary antibody	<ul style="list-style-type: none"> <li>Increase incubation period of primary antibody. Antibody can be incubated for at least one hour at room temperature or overnight at 4°C.</li> </ul>
	Insufficient incubation of secondary antibody	<ul style="list-style-type: none"> <li>Increase incubation period of secondary antibody (please see manufacturer's recommendations for incubation time and temperature).</li> </ul>
	Membrane over-washed	<ul style="list-style-type: none"> <li>Shorten wash times and/or reduce number of washes.</li> <li>Use a washing buffer that does not contain a detergent, or that has a lower concentration of detergent present.</li> </ul>
	Incompatible developing reagent	<ul style="list-style-type: none"> <li>Make sure the developing reagent being used is compatible with the enzyme conjugate.</li> <li>Ensure substrate is made correctly by following the manufacturer's instructions.</li> </ul>
	Excess salt present	<ul style="list-style-type: none"> <li>Decrease amount of salt present in wash buffer.</li> <li>Decrease amount of salt present in antibody dilution buffer.</li> </ul>
	Degraded/Incorrect developing reagent	<ul style="list-style-type: none"> <li>Ensure the developing reagent was prepared correctly.</li> <li>Check that the reagent is still active. If not, purchase new reagent.</li> </ul>
	For ECL method, film is bad/expired	<ul style="list-style-type: none"> <li>Ensure film is not expired or exposed. If so, purchase new film.</li> </ul>
	For ECL method, ECL developing solutions are old/expired	<ul style="list-style-type: none"> <li>Use fresh ECL developing solutions.</li> </ul>
	For ECL method, film exposure time is too short	<ul style="list-style-type: none"> <li>Increase exposure time of the film.</li> </ul>
	For ECL method, cling film interfering with reaction	<ul style="list-style-type: none"> <li>Use different brand of cling film.</li> </ul>
<b>High Background</b>	Antibody concentration too high	<ul style="list-style-type: none"> <li>Check manufacturer's recommendations for primary and/or secondary antibody concentrations.</li> <li>Test a range of concentrations to find optimal condition for individual assay.</li> </ul>
	Over-incubation of antibodies	<ul style="list-style-type: none"> <li>Check manufacturer's protocol to ensure the correct incubation time and temperature is used. If this information is not supplied by the manufacturer, optimize incubation time through testing.</li> </ul>
	Non-specific binding of antibodies	<ul style="list-style-type: none"> <li>Ensure the primary antibody is specific only for the protein that is being targeted.</li> <li>Run a control, omitting the primary antibody incubation. If bands develop, choose a different secondary antibody.</li> <li>Choose a different host species for secondary antibody.</li> </ul>

# Western Transfer Troubleshooting Guide *continued...*

Problem	Possible source	Suggestion
High Background continued	Cross reaction of antibodies with proteins in blocking buffer and/or sample	<ul style="list-style-type: none"> <li>• Use a different blocking buffer formulation.</li> <li>• Goat antibodies will react with BSA due to a slight recognition of the bovine protein by the goat antibody. This will lead to a purple sheen on your membrane. If this occurs, use a different species antibody or a different blocking buffer.</li> <li>• If secondary antibody is suspected, dilute antibody in buffer containing 1-5% normal serum from the same species as target protein.</li> </ul>
	Ineffective blocking buffer	<ul style="list-style-type: none"> <li>• Use a different blocking buffer formulation.</li> <li>• Add detergent to blocking buffer, such as TWEEN-20.</li> </ul>
	Insufficient blocking	<ul style="list-style-type: none"> <li>• Use a different blocking buffer formulation.</li> <li>• Batch of blocking buffer may be inactive. Use fresh blocking buffer.</li> <li>• If blocking overnight at 4°C, this may decrease blocking efficiency since lower temperatures may lessen the effectiveness. Try incubation for one hour at room temperature.</li> <li>• Optimize incubation time and/or temperature of blocking step.</li> </ul>
	Insufficient washing	<ul style="list-style-type: none"> <li>• After each step, wash membrane 3 times for 10 minutes each. Increase the duration of the washing step if this is not sufficient.</li> <li>• Try a different detergent in washing buffer or add TWEEN-20 if not already present.</li> <li>• Increase volume of washing buffer used.</li> </ul>
	Over-incubation in color development substrate	<ul style="list-style-type: none"> <li>• Shorten incubation time in color development solution. Monitor development until bands are present and stop reaction by washing membrane in diH<sub>2</sub>O.</li> </ul>
	Excess enzyme present	<ul style="list-style-type: none"> <li>• Reduce concentration of selected enzyme conjugate.</li> </ul>
	Interference by endogenous enzyme	<ul style="list-style-type: none"> <li>• Non Fat Dry Milk contains endogenous biotin and may interfere with avidin/biotin detection system. Use different blocking buffer, such as 3% BSA.</li> </ul>
	Contaminated reagents	<ul style="list-style-type: none"> <li>• Filter buffers before use to remove contaminant.</li> <li>• Make fresh buffers and re-run Western Transfer.</li> </ul>
	Membrane problems	<ul style="list-style-type: none"> <li>• Test new membranes.</li> <li>• During the entire procedure the membrane can only be dried between transfer and immunostaining. Once immunostaining has begun, the membrane cannot be dried until completion of immunostaining procedure. Re-run Western Transfer if membrane was dried at any other point during immunostaining procedure.</li> </ul>
	For ECL method, ECL film overexposed	<ul style="list-style-type: none"> <li>• Shorten film exposure time.</li> <li>• If signal from target protein is too strong, wait 5-10 minutes and re-expose to film.</li> </ul>

# Western Transfer Troubleshooting Guide *continued...*

Problem	Possible source	Suggestion
<b>Splotchy Background</b>	Uneven agitation during incubations	<ul style="list-style-type: none"> <li>• Ensure the membrane is agitated evenly by placing on a rocker or shaker during incubation.</li> </ul>
	Insufficient amount of incubation buffer	<ul style="list-style-type: none"> <li>• Ensure enough solution is present during each incubation period to fully submerge the membrane and allow it to float freely in the solution.</li> </ul>
	Air bubbles present during transfer	<ul style="list-style-type: none"> <li>• Gently remove all air bubbles from transfer “sandwich” before transfer is started. This can be done by using a roller or clean glass rod/Pasteur pipette.</li> </ul>
	Membrane problems	<ul style="list-style-type: none"> <li>• Ensure membrane is wetted thoroughly according to the manufacturer’s protocol.</li> <li>• Handle membranes with extreme care. Mishandled membranes can cause non-specific binding.</li> <li>• Handling membranes with bare hands can lead to contamination of membrane. Use forceps or wear gloves when handling membrane.</li> </ul>
	Aggregation of HRP conjugate	<ul style="list-style-type: none"> <li>• If using HRP, filter conjugate to remove HRP aggregates.</li> <li>• Use a fresh sample of HRP conjugate.</li> </ul>
	Contamination of reagents	<ul style="list-style-type: none"> <li>• Filter buffers before use to remove contaminant.</li> <li>• Make fresh buffers and re-run Western Transfer.</li> </ul>
<b>Non-specific bands</b>	Antibody concentration too high	<ul style="list-style-type: none"> <li>• Check manufacturer’s recommendations for primary and/or secondary antibody concentrations.</li> <li>• Test a range of concentrations to find optimal condition for individual assay.</li> </ul>
	Old or degraded antibody	<ul style="list-style-type: none"> <li>• Check manufacturer’s recommendations for storage and/or expiration date. If expired or past storage time, purchase new antibody.</li> <li>• If antibody was subjected to repeated freeze/thaw cycles purchase new antibody, as this can affect the structure and protein:antibody binding.</li> </ul>
	Non-specific binding of primary antibody	<ul style="list-style-type: none"> <li>• Decrease concentration of primary antibody.</li> <li>• Check concentration of protein being added to gel.</li> <li>• Use a more specific antibody, such as a monoclonal antibody or Antigen Affinity Purified polyclonal antibody.</li> <li>• Add a small amount of detergent, such as TWEEN-20 (0.1-0.5%) to the primary antibody solution and/or blotting buffer.</li> <li>• Increase number/duration of washes.</li> </ul>
	Non-specific binding of secondary antibody	<ul style="list-style-type: none"> <li>• Decrease concentration of secondary antibody.</li> <li>• Run a control, omitting the primary antibody incubation. If bands develop, choose a different secondary antibody.</li> <li>• Add a small amount of detergent, such as TWEEN-20 (0.1-0.5%) to the secondary antibody solution.</li> <li>• Increase number/duration of washes.</li> </ul>

# Western Transfer Troubleshooting Guide *continued...*

Problem	Possible source	Suggestion
<b>Non-Specific Bands</b> continued	Aggregation of target protein	<ul style="list-style-type: none"> <li>• Add or increase a reducing agent, such as DTT or BME, to ensure all disulfide bonds are reduced.</li> <li>• Heat protein sample in a hot water bath for 5-10 minutes before loading onto gel.</li> <li>• Check concentration of protein being added to gel. A concentration that is too high can cause protein aggregation. Re-run Western Transfer with a lower concentration of protein.</li> </ul>
	Degradation of protein sample	<ul style="list-style-type: none"> <li>• Make fresh samples and minimize freeze/thaw cycles of samples.</li> <li>• Add protease inhibitor to samples prior to storage.</li> <li>• Keep samples stored between -20°C and -80°C.</li> </ul>
	Insufficient blocking	<ul style="list-style-type: none"> <li>• Test a different blocking buffer formulation.</li> <li>• Batch of blocking buffer may be inactive. Use a fresh blocking buffer.</li> <li>• If blocking overnight at 4°C, this may decrease blocking efficiency since lower temperatures may lessen the effectiveness. Try incubation for one hour at room temperature.</li> <li>• Add TWEEN-20 to blocking buffer.</li> <li>• Optimize incubation time and/or temperature of blocking step.</li> </ul>
	SDS facilitates binding to immobilized protein bands	<ul style="list-style-type: none"> <li>• Ensure membrane is sufficiently washed after transfer of proteins.</li> <li>• Do not use SDS during immunostaining when using a nitrocellulose membrane.</li> </ul>
	Excess enzyme present	<ul style="list-style-type: none"> <li>• Reduce concentration of the selected enzyme conjugate.</li> </ul>
	Contamination of reagents	<ul style="list-style-type: none"> <li>• Filter buffers before use to remove contaminant.</li> <li>• Make fresh buffers and re-run Western Transfer.</li> </ul>
<b>Diffused/Fuzzy bands</b>	Antibody concentration too high	<ul style="list-style-type: none"> <li>• Check manufacturer's recommendations for primary and/or secondary antibody concentrations.</li> <li>• Test a range of concentrations to find optimal condition for individual assay.</li> </ul>
	Excess protein on gel	<ul style="list-style-type: none"> <li>• Further dilute protein samples before loading onto gel.</li> </ul>
	Gel over-heated/high voltage	<ul style="list-style-type: none"> <li>• Heat causes the gel to lose its structure and resolving power. Be sure the transfer reservoir is run in an ice bath.</li> <li>• Reduce voltage or current used during transfer.</li> </ul>
	Incorrect preparation of membrane	<ul style="list-style-type: none"> <li>• Pre-soak membrane in correct transfer solution (see membrane manufacturer's protocol). Ensure it is soaked for the correct amount of time.</li> </ul>
<b>White Bands</b> (ECL visualization method)	Antibody or protein concentration too high/Excessive signal generated	<ul style="list-style-type: none"> <li>• White bands are the result of rapid consumption of the substrate caused by the presence of too much conjugate. This is the result of high concentrations of the antibodies and/or proteins. Check manufacturer's recommendations for antibody and/or protein concentrations.</li> </ul>

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