PEPROTECH®
OUR SUPPORT, YOUR DISCOVERY

PeproGrow™ Endothelial Media

Maintenance Media for Endothelial Cells

PeproGrow™ EPC, PeproGrow™ MacroV, and PeproGrow™ MicroV

- Complete media
- Antibiotic-free, antimycotics-free, antifungal-free, and phenol red-free
- Maintain outstanding endothelial cell morphology and function
- Increased activity of endothelial nitric oxide synthase (eNOS)

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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 Medium); and endothelial cells from small vessels (PeproGrow™ MicroV Medium). 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 provides an optimal cell culture environment for macrovascular and microvascular endothelial cells, as well as for EPC; growing cells at rates that exceed commercially available media.

PeproTech's Endothelial Cell Culture Media is 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, antifungal, or phenol red, as these components can cause cell stress and masking effects that may reduce complete medium shelf life and influence experimental results.

Media Products

PeproGrow™ EPC Kit (ENDO-BM & GS-EPC)	Catalog #700-EPC	
Basal Medium	ENDO-BM	500mL
Growth Supplement EPC	GS-EPC*	75mL

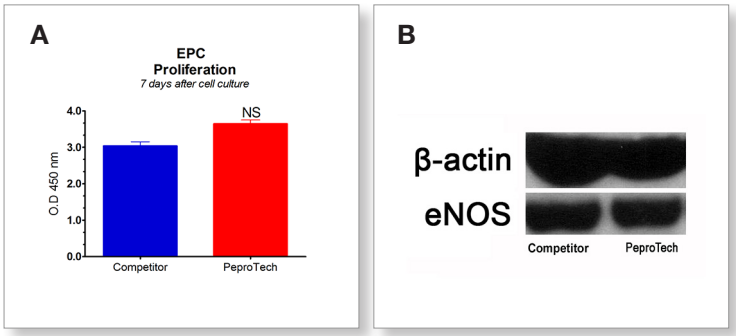
PeproGrow™ MacroV Kit (ENDO-BM & GS-MacroV)	Catalog #700-MacroV	
Basal Medium	ENDO-BM	500mL
Growth Supplement MacroV	GS-MacroV*	25mL

PeproGrow™ MicroV Kit (ENDO-BM & GS-MicroV)	Catalog #700-MicroV	
Basal Medium	ENDO-BM	500mL
Growth Supplement MicroV	GS-MicroV*	35mL

* Contains FBS

PeproGrow™ Endothelial Media Figures and Descriptions

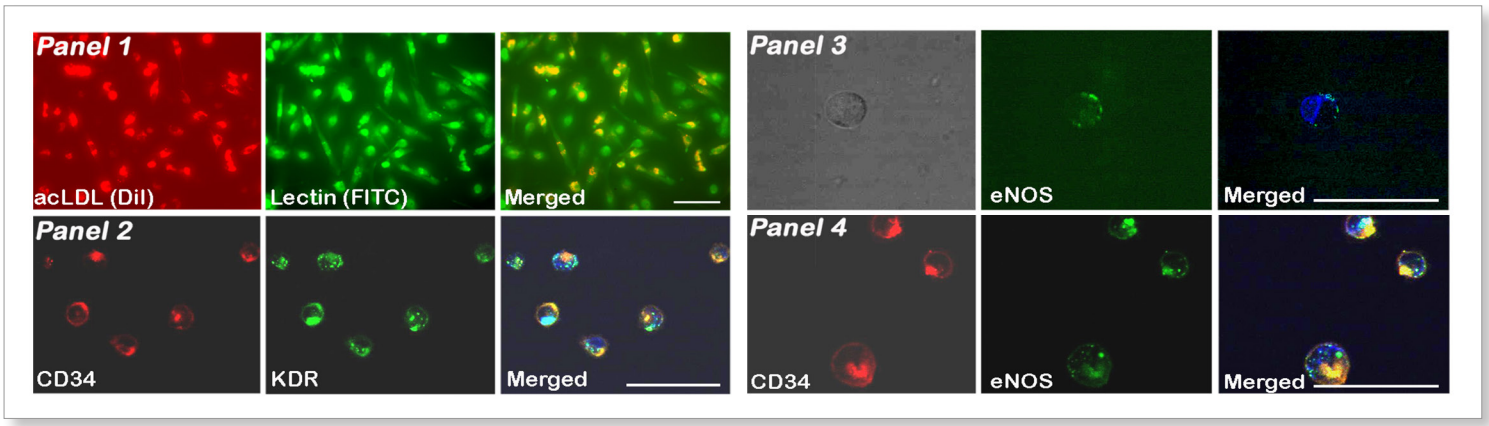
Figure 1



Endothelial Progenitor Cell, EPC Proliferation.

EPCs were seeded onto fibronectin-coated plates, and incubated for 7 days in the PeproGrow EPC Kit and a competitor's medium. Figure 1(A) represents the proliferative ability of EPCs assessed 7 days after cell cultivation using the XTT assay according to the manufacturer protocol. The proliferative ability of EPCs was expressed as the average optical density (O.D.) calculated using a plate reader for two independent assays run in triplicate. Figure 1(B) represents a standard Western Blot assay.

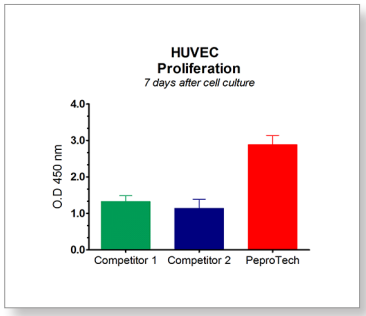
Figure 2



Endothelial Progenitor Cell, EPC Characterization.

EPCs were cultured for 7 days. Each description correlates to images from left to right: Panel 1: Acetylated LDL uptake by adherent spindle-shaped EPCs, FITC-conjugated lectin UEA-1 binding to the surface of EPCs, and positive double-stained (merged image) EPCs for acetylated LDL uptake and lectin binding. Panel 2: Immunofluorescence detection of CD34 antigen (red), KDR (green) on the surface of EPCs, and merged image. Panel 3: Immunofluorescence detection of eNOS on a single non-stained EPC (green). Panel 4: Immunofluorescence detection of CD34 antigen on the EPCs surface (red), eNOS (green), and merged image. The EPCs nuclei were stained with the blue fluorescent DNA dye DRAQ5™.

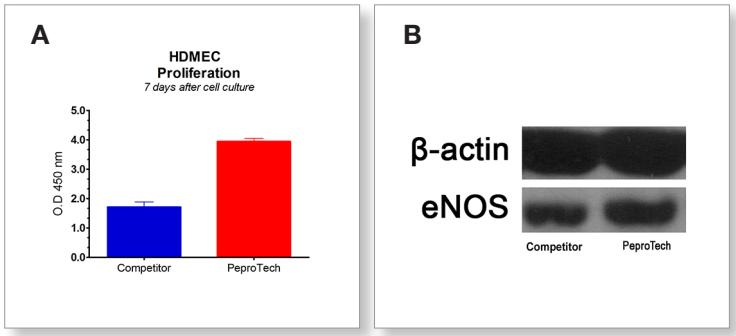
Figure 3



Macrovascular Endothelial Cell, HUVEC Proliferation.

HUVECs were seeded onto fibronectin-coated plates and incubated for 7 days in the PeproGrow MacroV Kit, and two competitors' media. The proliferative ability of HUVECs was assessed 7 days after cell cultivation using the XTT assay following the manufacturer's protocol. The proliferative ability of HUVECs was expressed as the average of optical intensity (O.D.) calculated using a plate reader from two independent assays run in triplicate.

Figure 4



Microvascular Endothelial Cell, HDMEC Proliferation.

HDMECs were seeded onto fibronectin-coated plates and incubated for 7 days in the PeproGrow MacroV Kit and a competitor's medium. Figure 4(A) represents the proliferative ability of HDMECs assessed 7 days after cell cultivation using the XTT assay following the manufacturer's protocol. The proliferative ability of HDMECs was expressed as the average of optical density (O.D.) calculated using a plate reader from two independent assays run in triplicate. Figure 4(B) represents a standard Western Blot assay.

PeproGrow™ Endothelial Media

Specifications

Sterility	Absence of bacteria, mycoplasma and fungi
pH	7.4-7.8
Osmolality	260-280 mOsm
Endotoxin Testing	<0.5 EU/mL

Recommended Cell Types

PeproGrow™ EPC is recommended for Endothelial Progenitor Cells:

Human Endothelial Progenitor Cells (hEPCs)

PeproGrow™ MacroV is recommended for Macrovascular Endothelial Cells:

Human Umbilical Vein Endothelial Cells (HUVECs)
Human Umbilical Artery Endothelial Cells (HUAECs)
Human Aortic Endothelial Cells (HAoECs)
Human Pulmonary Artery Endothelial Cells (HPAECs)
Human Saphenous Vein Endothelial Cells (HSaVECs)

PeproGrow™ MicroV is recommended for Microvascular Endothelial Cells:

Human Coronary Artery Endothelial Cells (HCAECs)
Human Pancreatic Microvascular Endothelial Cells (HPaMECs)
Human Dermal Microvascular Endothelial Cells (HDMECs)
Human Pulmonary Microvascular Endothelial Cells (HPMECs)
Human Dermal Lymphatic Endothelial Cells (HDLECs)
Human Brain Microvascular Endothelial Cells (HBMECs)

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