



Product Sheet

Vascular Cell Basal Medium (ATCC® PCS-100-030™)

Please read this FIRST

Storage Temp.
2°C to 8°C, protect from light

Biosafety Level
1

Description

Product Description: Vascular Cell Basal Medium is a sterile, phenol red-free, liquid tissue culture medium intended for use as one component in a complete ATCC® Primary Cell Solutions™ system. This system is designed to support cells derived from the human cardiovascular system, including the following cell types:

Endothelial cells derived from large vessels

- Primary Umbilical Vein Endothelial Cells; Normal, Human, ATCC PCS-100-010
- Primary Umbilical Vein Endothelial Cells; Normal, Human, Pooled, ATCC PCS-100-013
- Primary Aortic Endothelial Cells; Normal, Human, ATCC PCS-100-011
- Primary Coronary Artery Endothelial Cells; Normal, Human, ATCC PCS-100-020
- Primary Pulmonary Artery Endothelial Cells; Normal, Human, ATCC PCS-100-022

Microvascular endothelial cells

- Primary Dermal Microvascular Endothelial Cells; Normal, Human, Neonatal, ATCC PCS-110-010

Smooth muscle cells derived from large vessels

- Primary Aortic Smooth Muscle Cells; Normal, Human, ATCC PCS-100-012
- Primary Coronary Artery Smooth Muscle Cells; Normal, Human, ATCC PCS-100-021
- Primary Pulmonary Artery Smooth Muscle Cells; Normal, Human, ATCC PCS-100-023

Muscle cells derived from heart

- Primary Cardiomyocytes; Normal, Human, ATCC PCS-120-010

This system is designed to support cells derived from normal human large vessels such as human umbilical vein endothelial cells, aortic endothelial cells or aortic smooth muscle cells, as well as microvascular endothelial cells. Vascular Cell Basal Medium contains essential and non-essential amino acids, vitamins, other organic compounds, trace minerals and inorganic salts. To support the proliferation and plating efficiency of cells derived from the vascular system, Vascular Cell Basal Medium must be supplemented with the appropriate cell-specific growth kit.

- A. For endothelial cells derived from large vessels (e.g., Normal Primary Human Umbilical Vein Endothelial Cells (HUVEC), ATCC PCS-100-010, Primary Umbilical Vein Endothelial Cells; Normal, Human, Pooled, ATCC PCS-100-013, Primary Aortic Endothelial Cells, ATCC PCS-100-011), supplement Vascular Cell Basal Medium with one of the following kits:
 1. Endothelial Cell Growth Kit-BBE (ATCC PCS-100-040)
 2. Endothelial Cell Growth Kit-VEGF (ATCC PCS-100-041)
- B. For microvascular endothelial cells derived from normal human tissue (e.g., Primary Dermal Microvascular Endothelial Cells; Normal, Human, Neonatal, ATCC PCS-110-010), supplement Vascular Cell Basal Medium with one of the following kits:
 1. Microvascular Endothelial Cell Growth Kit-BBE (ATCC PCS-110-040)
 2. Microvascular Endothelial Cell Growth Kit-VEGF (ATCC PCS-110-041)
- C. For smooth muscle cells derived from large vessels (e.g., Primary Aortic Smooth Muscle Cells, ATCC PCS-100-012), supplement Vascular Cell Basal Medium with the Vascular Smooth Muscle Cell Growth Kit (ATCC PCS-100-042).
- D. Optional media supplements:
 1. Gentamicin-Amphotericin B Solution (ATCC PCS-999-025)
 2. Penicillin-Streptomycin-Amphotericin B Solution (ATCC PCS-999-002)
 3. Phenol Red (ATCC PCS-999-001)

Volume: 475 mL

Directions for Use

Preparation of Complete Growth Media

1. Obtain one growth kit from the freezer; make sure that the caps of all components are tight.
2. Thaw the components of the growth kit just prior to adding them to the basal medium. It is necessary to warm the L-glutamine component in a 37°C water bath and shake to dissolve any precipitates prior to adding to the basal medium.
3. Obtain one bottle of Vascular Cell Basal Medium (475 mL) from cold storage.
4. Decontaminate the external surfaces of all growth kit component vials and the basal medium bottle by spraying them with 70% ethanol.
5. Using aseptic technique and working in a laminar flow hood or biosafety cabinet, transfer the volume of each growth kit component, as indicated in Table 1, 2, 3, 4, or 5 to the bottle of basal medium using a separate sterile pipette for each transfer.

Table 1. If using the Endothelial Cell Growth Kit-BBE (ATCC® PCS-100-040), add the indicated volume for each component:

Component	Volume	Final Concentration
-----------	--------	---------------------

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor



Product Sheet

Vascular Cell Basal Medium (ATCC® PCS-100-030™)

Please read this FIRST

Storage Temp.
**2°C to 8°C, protect
from light**

Biosafety Level
1

Bovine Brain Extract (BBE)	1.0 mL	0.2%
rh EGF	0.5 mL	5 ng/mL
L-glutamine	25.0 mL	10 mM
Heparin sulfate	0.5 mL	0.75 Units/mL
Hydrocortisone hemisuccinate	0.5 mL	1 µg/mL
Fetal Bovine Serum	10.0 mL	2%
Ascorbic Acid	0.5 mL	50 µg/mL

Table 2. If using the Endothelial Cell Growth Kit-VEGF (ATCC® PCS-100-041), add the indicated volume for each component:

Component	Volume	Final Concentration
rh VEGF	0.5 mL	5 ng/mL
rh EGF	0.5 mL	5 ng/mL
rh FGF basic	0.5 mL	5 ng/mL
rh IGF-1	0.5 mL	15 ng/mL
L-glutamine	25.0 mL	10 mM
Heparin sulfate	0.5 mL	0.75 Units/mL
Hydrocortisone hemisuccinate	0.5 mL	1 µg/mL
Fetal Bovine Serum	10.0 mL	2%
Ascorbic acid	0.5 mL	50 µg/mL

Table 3. If using the Vascular Smooth Muscle Growth Kit (ATCC® PCS-100-042), add the indicated volume for each component:

Component	Volume	Final Concentration
rh FGF-basic	0.5 mL	5 ng/mL
rh Insulin	0.5 mL	5 µg/mL
Ascorbic acid	0.5 mL	50 µg/mL
L-glutamine	25.0 mL	10 mM
rh EGF	0.5 mL	5 ng/mL
Fetal Bovine Serum	25.0 mL	5%

Table 4. If using the Microvascular Endothelial Cell Growth Kit-BBE (ATCC® PCS-110-040), add the indicated volume for each component:

Component	Volume	Final Concentration
Bovine Brain Extract (BBE)	1.0 mL	0.2%
rh EGF	0.5 mL	5 ng/mL
L-glutamine	25.0 mL	10 mM
Heparin sulfate	0.5 mL	0.75 Units/mL
Hydrocortisone hemisuccinate	0.5 mL	1 µg/mL
Fetal Bovine Serum	25.0 mL	5%
Ascorbic acid	0.5 mL	50 µg/mL

Table 5. If using the Microvascular Endothelial Cell Growth Kit-VEGF (ATCC® PCS-110-041), add the indicated volume for each component:

Component	Volume	Final Concentration
rh VEGF	0.5 mL	5 ng/mL
rh EGF	0.5 mL	5 ng/mL
rh FGF basic	0.5 mL	5 ng/mL
rh IGF-1	0.5 mL	15 ng/mL
L-glutamine	25.0 mL	10 mM
Heparin sulfate	0.5 mL	0.75 Units/mL
Hydrocortisone hemisuccinate	0.5 mL	1 µg/mL
Fetal Bovine Serum	25.0 mL	5%

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor



Product Sheet

Vascular Cell Basal Medium (ATCC® PCS-100-030™)

Please read this **FIRST**

Storage Temp.
**2°C to 8°C, protect
from light**

Biosafety Level
1

Ascorbic acid	0.5 mL	50 µg/mL
---------------	--------	----------

Table 6. If using the Cardiomyocyte Growth Kit (ATCC® PCS-120-040), add the indicated volume for each component:

Component	Volume	Final Concentration
L-Glutamine	25.0 mL	10 mM
Fetal Bovine Serum	25.0 mL	5%
Fetuin	5.0 mL	25 mg/mL
rh FGF-b	0.5 mL	5 ng/mL
rh Insulin	0.5 mL	5 mg/mL
Ascorbic Acid	0.5 mL	50 µg/mL
rh EGF/TGF-b1	0.5 mL	5 ng/mL, 30 pg/mL

Antimicrobials and phenol red are not required for proliferation but may be added if desired. The recommended volume of each **optional** component to be added to the complete growth media is summarized in Table 7.

Table 7. Addition of Antimicrobials/Antimycotics and Phenol Red (Optional)

Component	Volume	Final Concentration
Gentamicin- Amphotericin B Solution	0.5 mL	Gentamicin: 10 µg/mL Amphotericin B: 0.25 µg/mL
Penicillin- Streptomycin- Amphotericin B Solution	0.5 mL	Penicillin: 10 Units/mL Streptomycin: 10 µg/mL Amphotericin B: 25 ng/mL
Phenol Red	0.5 mL	33 µM

- Tightly cap the bottle of complete growth medium and swirl the contents gently to assure a homogeneous solution. Do not shake forcefully to avoid foaming. Label and date the bottle.
- Complete growth media should be stored in the dark at 2°C to 8°C (do not freeze). When stored under these conditions, complete media is stable for 30 days.

Quality Control Specifications

Functional testing: Rate of proliferation and morphology.

pH: 7.8 ± 0.3

**A Certificate of Analysis (COA) is available upon request for each lot of Vascular Cell Basal Medium.*

ATCC Warranty

The viability of ATCC® products is warranted for 30 days from the date of shipment, and is valid only if the product is stored and cultured according to the information included on this product information sheet. ATCC lists the media formulation that has been found to be effective for this strain. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this strain. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans.

While ATCC uses reasonable efforts to include accurate and up-to-date information on this product sheet, ATCC makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. ATCC does not warrant that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, and use. ATCC is not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to insure authenticity and reliability of strains on deposit, ATCC is not liable for damages arising from the misidentification or misrepresentation of cultures.

Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at www.atcc.org

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor

Additional information on this culture is available on the ATCC web site at www.atcc.org.

© ATCC 2017. All rights reserved. ATCC is a registered trademark of the American Type Culture Collection. [06/27]