Cultrex® In Vitro Angiogenesis Assay Kit Tube Formation

In vitro Assay kit for Investigating Angiogenesis

Angiogenesis is the process whereby endothelial cells form new blood vessels from existing vasculature. Angiogenesis occurs not only during physiological processes, such as wound healing, reproduction and embryonic development, but also during disease processes (*e.g.* tumor growth and metastasis, rheumatoid arthritis and diabetic retinopathy). Major steps involved in angiogenesis include: activation of endothelial cells in response to angiogenic factors, release of proteases to dissolve the basement membrane; endothelial cell migration and proliferation, invasion, tubule formation and capillary sprouting.

Cultrex® Reduced Growth Factor (RGF) Basement Membrane Extract (BME) provides the appropriate microenvironment for endothelial cells to align, migrate and form three-dimensional capillary-like structures in vitro. Sulforaphane [1-isothiocya-nato-(4R)-methylsulfinyl)-butane], found in broccoli and other cruciferous vegetables, is a naturally occurring cancer chemopreventive agent, and is provided as a control inhibitor of in vitro endothelial cell tube formation on Cultrex® BME. Calcein AM is provided for rapid and accurate measurement of cell viability and/or cytotoxicity, and real-time kinetic analysis of tube formation. Trevigen's In Vitro Angiogenesis Assay Kit provides a high throughput platform for studying inhibition and induction of tube formation in vitro, in a 96 well format.

Ordering Information:

Description	Size	Catalog #
Cultrex® In Vitro Angiogenesis Assay Kit	96 Tests	3470-096-K

Features & Benefits

F Each kit contains RGF BME qualified for low levels of spontaneous tube formation in the absence of angiogenic factors and high levels of tube formation in the presence of angiogenic factors, as tested using human umbilical vascular endothelial cells (HUVEC).

B Specificity of responses with high reproducibility of tube formation under defined conditions. Low background in the absence of angiogenic factors.

F Each lot of RGF BME in the In Vitro Angiogenesis Assay Kit is tested to assure low, non-interfering endotoxin levels.

B Reproducibility between each lot of kits purchased.

F Each kit contains enough reagents for 96 assays.

B Compatible with high throughput requirements.

F A proven tube formation inhibitor is provided with each kit.

B Every kit has a tested inhibitor for a negative control.

F Each kit contains both colorimetric and fluorometric cell staining reagents.

B Increased contrast for unambiguous quantitation of junctions.

ANGIOGENESIS • DNA DAMAGE & REPAIR • APOPTOSIS

Trevigen, Inc.
8405 Helgerman Court
Gaithersburg, Maryland 20877
1-800-873-8443

Cultrex® In Vitro Angiogenesis Assay Kit
Tube Formation

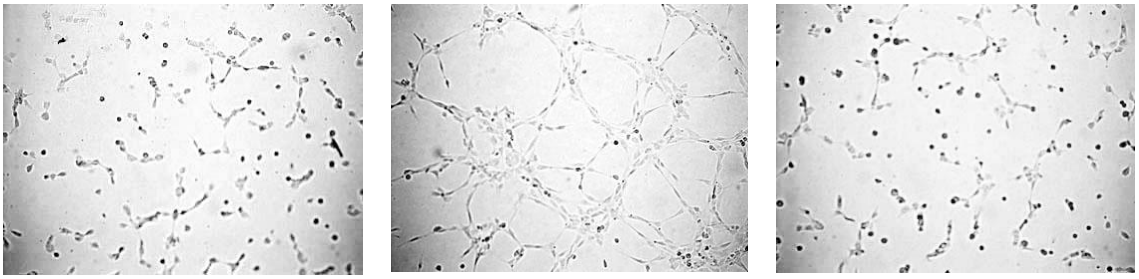
Kit Contents:

Description	Size	Catalog #
BME Growth Factor Reduced	5 ml	3433-005-01
Calcein AM	50 µg	4892-010-01
Cell Staining Solution	15 ml	3470-096-01
Sulforaphane, 10 mM	15 µl	3470-096-02

Typical Results:

HUVEC were harvested, counted and diluted in either Endothelial Basal Medium-2 (EBM-2) (which does not contain serum or angiogenic factors), or Endothelial Growth Medium-2 (EGM-2) (Cambrex), containing all supplements and growth factors necessary to support HUVEC growth. Trypsinized and harvested HUVEC were aliquoted at 10^4 HUVEC per well onto gelled RGF BME and thereafter cultured for four hours at 37°C and 5% CO_2. Typical phase contrast images with HUVEC in EBM-2 without added angiogenic factors (panel A), in EGM-2 with added factors (panel B) and in EGM-2 (with angiogenic factors) but in the presence of 5 µM Sulforaphane (panel C) are shown at 10X magnification.

A B C



Related Products:

Description	Size	Catalog #
DIVAA™ Starter Kit	48 Tests	3450-048-SK
DIVAA™ Activation Kit	48 Tests	3450-048-K
DIVAA™ Inhibition Kit	48 Tests	3450-048-IK
Cultrex® Endothelial Cell Invasion Kit	96 Wells	3471-096-K
CultreCoat® 96 Well In Vitro Vascular Permeability Assay	96 Wells	3475-096-K
CultreCoat® 24 well In Vitro Vascular Permeability Assay	24 Wells	3475-024-K
BME Reduced Growth Factor w/ phenol red	5 ml	3431-005-01
BME PathClear® Reduced Growth Factor w/ phenol red	5 ml	3431-005-02
BME w/o phenol red	5 ml	3432-005-01
BME PathClear® w/o phenol red	5 ml	3432-005-02
BME Reduced Growth Factor w/o phenol red	5 ml	3433-005-01
BME PathClear® Reduced Growth Factor w/o phenol red	5 ml	3433-005-02

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