IncuCyte® Angiogenesis 96-well PrimeKit

Catalog number: 4452

Product Information

Presentation, storage and stability

The IncuCyte Angiogenesis PrimeKit is offered as a cryopreserved kit composed of two boxes, a dry ice shipment and a room temperature shipment, containing the reagents required to set up and run a single 96-well angiogenesis tube formation assay. The components of the boxes are detailed below:

Dry Ice Shipment:

- Normal Human Dermal Fibrobalst (NHDF) Cell Vial
- Human Umbilical Vein Endothelial Cells expressing IncuCyte CytoLight Green (HUVEC CytoLight Green)
- Seeding Media Supplement (2 mL total volume)
- Growth Media Supplement (0.4 mL total volume)
- Assay media Supplement (2.5 mL total volume

Room Temperature Shipment:

- Seeding Basal media (40 mL total volume)
- Growth Basal media (20 mL total volume)
- Assay Basal Media (125 mL total volume)
- 96-well Assay Plate

Upon arrival, the cells in this kit should be IMMEDIATELY transferred to liquid nitrogen. When stored in liquid nitrogen, they will remain viable until the indicated expiration date. The media supplements contained in this kit should be kept FROZEN at -20°C until use or expiration date. The medias in this kit should be REFRIGERATED at 4°C until use or the expiration date located on each bottle. The kit contains sufficient culture media to support network development over the 8-10 day period.

Background and intended use

The IncuCyte Angiogenesis PrimeKit contains early passage normal human endothelial cells labeled with a cytoplasmic green fluorescent protein and early passage normal human interstitial cells. When handled according to the PrimeKit Angiogenesis protocol, this coculture model recapitulates all phases of the in vivo angiogenesis process, including cell proliferation, migration, morphogenesis, and anastomosis. Under basal conditions, the cultures exhibit a low level of capillary-like tubules after 8-14 days, unless stimulated with a growth factor such as VEGF or bFGF. Tubule development is believed to closely mimic in vivo angiogenesis and is enhanced by known angiogenic stimulators. Measuring anti-angiogenic events requires the presence of a stimulating factor, such as VEGF. Both enhancement and suppression occur in a concentration-dependent manner.

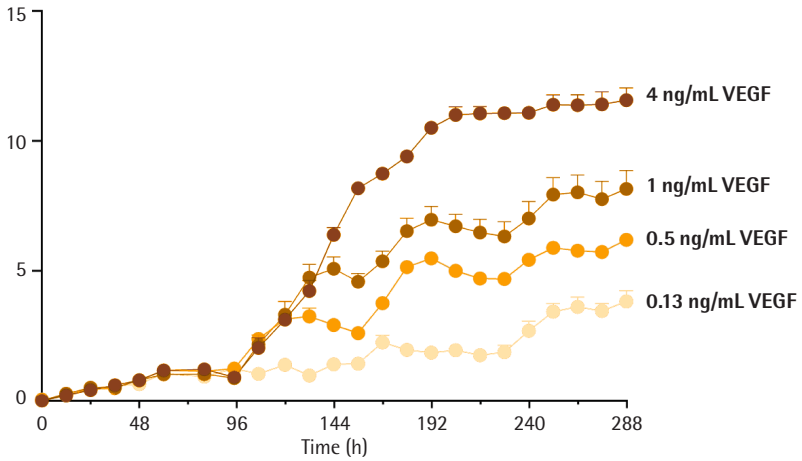
The IncuCyte Angiogenesis PrimeKit contains matched cells and all media components required to complete a successful experiment. Our 3 years of experimental development has repeatedly shown that growth factors purchased from different sources can result in highly variable responses. As such, all growth factor supplement and inhibitor kits available for purchase from Essen BioScience, including VEGF, bFGF, and suramin have been quality controlled to ensure maximal tube formation and/or inhibition if used as described. When used in conjunction with the IncuCyte® live-cell analysis system, the resulting effect of growth factors and test agents on tube formation can be measured using the IncuCyte® automated angiogenesis algorithm. The data generated with this algorithm can be used to assess angiogenic potential via tube length, branch point, and tube area metrics.

Recommended use

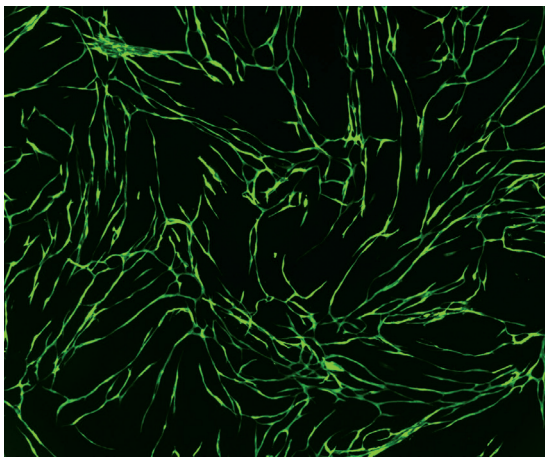
The MMP Orange Reagent Kit has been validated for use with We recommended that the IncuCyte Angiogenesis PrimeKit handled according to the PrimeKit Angiogenesis protocol, using VEGF or bFGF to induce growth factor-mediated tube formation. Addition of 100 µM suramin will inhibit VEGF-mediated tube formation by >90 %. Careful adherence to the PrimeKit protocol will minimize unwanted edge effects, enabling the use of the entire 96-well plate for test agent investigation. When used in an IncuCyte® live-cell analysis system, we recommend data collection every 6-12 hours.

Please see the relevant protocol published on our website:
essenbio.com/angio

Figure 1. Concentration dependent vascular tube formation in PrimeKit HUVEC and human dermal fibroblast co-culture model



(A) Concentration dependent vascular tube formation induced by Vasoactive Endothelial Growth Factor (VEGF) in PrimeKit HUVEC and human dermal fibroblast co-culture model.



(B) Example image of VEGF (4 ng/ml) induced vascular structures.

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Product	Cat No.	Quantity
IncuCyte® Angiogenesis 96-well PrimeKit	4452	One kit
IncuCyte® Angiogenesis PrimeKit VEGF/Suramin Supplement Kit	4437	Two vials
IncuCyte® Angiogenesis PrimeKit Optimized Assay Medium	4541	125 mL
HUVEC IncuCyte® CytoLight Green Cells	4453	One vial
IncuCyte® CytoLight Green Lentivirus (CMV promotoer, no selection)	4513	One vial

Product label license

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