

# VascuNet™ Pericyte Co-Culture Assay

Catalog Number: EM-2202

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| Overview     | <p>The VascuNet Pericyte Co-Culture Assay combines human embryonic stem cell (ESI-017)-derived pericytes (PC-M cells), with primary human umbilical vein endothelial cells (HUVECs) in a co-culture system designed for a 96-well plate assay format. These unique PC-M cells display several key properties of pericytes, including expression of CD146, pro-angiogenic function, and stabilization of endothelial tube networks. This kit includes all cells and media components required to support optimal cell expansion and vasculogenic assay performance in a stable, more physiologically accurate model system.</p> <p>There are a variety of applications for the VascuNet Pericyte Co-Culture Assay, including screening of anti-angiogenic compounds in cancer research, as the destabilization of tumor vascularization is a primary goal of cancer therapies. This unique co-culture system can also be used to assess pro-angiogenic compounds, as well as to study the relevant timing of delivery and long-term efficacy of pro- and anti-angiogenic compounds.</p> <p>The co-cultures in this assay system support vasculogenic tube assembly, resulting in the generation of extensive tube networks. Each kit undergoes rigorous quality control assessment to ensure reproducible vasculogenic tube assembly.</p> |
| Format       | 96-well plate  |
| Application  | Screening and the assessment of pro- or anti-angiogenic compounds  |
| Sample Types | Small molecules, recombinant proteins, DNA/RNA constructs, or conditioned media  |
| Assay Time   | Tube networks are maintained for at least 4 days   |

| Cat. No. | Component                                  | Quantity                                  | Storage         |
|----------|--|---|-----------------|
| ES-1002  | PC-M cells (ESI-017-derived pericytes) p19 | 1 vial, $\geq 5.0 \times 10^5$ cells/vial | Liquid Nitrogen |
| ES-6001  | HUVECs (secondary donor pool) p5           | 1 vial, $\geq 1.0 \times 10^6$ cells/vial | Liquid Nitrogen |
| EM-1111  | VascuNet Basal Medium                      | 475 mL                                    | 2 - 8°C         |
| EM-1420  | Recombinant Human VEGF                     | 0.5 mL                                    | -20°C           |
| EM-1421  | Recombinant Human EGF                      | 0.5 mL                                    | -20°C           |
| EM-1422  | Recombinant Human FGF basic                | 0.5 mL                                    | -20°C           |
| EM-1423  | Recombinant Human IGF-1                    | 0.5 mL                                    | -20°C           |
| EM-1424  | Ascorbic Acid                              | 0.5 mL                                    | -20°C           |
| EM-1425  | Hydrocortisone Hemisuccinate               | 0.5 mL                                    | -20°C           |
| EM-1426  | Heparin Sulfate                            | 0.5 mL                                    | -20°C           |
| EM-1428  | FBS  | 25 mL                                     | -20°C           |
| EM-1427  | L-Glutamine (for growth medium)            | 25 mL                                     | -20°C           |
| EM-1112  | VascuNet Basal Assay Medium                | 95 mL                                     | 2 - 8°C         |
| EM-1429  | L-Glutamine (for assay medium)             | 5 mL                                      | -20°C           |
| EM-1430  | Suramin Hexasodium Salt (negative control) | 0.5 mL, 1 mM in H <sub>2</sub> O          | -20°C           |

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|------------|--|
| Stability  | All kit components are stable for a minimum of 3 months from date of receipt when stored as directed.  |
| References | <p>Gerhardt, H. and Betsholtz, C. (2003) Endothelial-pericyte interactions in angiogenesis. <i>Cell Tissue Res</i> 314: 15–23.</p> <p>Hamilton, N.B., et al. (2010) Pericyte-mediated regulation of capillary diameter: a component of neurovascular coupling in health and disease. <i>Front Neuroenergetics</i> 2: 5.</p> <p>Stratman, A.N., et al. (2009) Pericyte recruitment during vasculogenic tube assembly stimulates endothelial basement membrane matrix formation. <i>Blood</i> 114: 5091–5101.</p> <p>von Tell, D., et al. (2006) Pericytes and vascular stability. <i>Exp Cell Res</i> 312: 623–629.</p> |

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