## Product datasheet

### Angiogenesis Assay Kit (In Vitro) ab204726

**Overview**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Angiogenesis Assay Kit (In Vitro)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Fluorescent</td>
</tr>
<tr>
<td>Assay type</td>
<td>Cell-based (qualitative)</td>
</tr>
<tr>
<td>Assay time</td>
<td>6h 00m</td>
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</table>

**Product overview**

Angiogenesis Assay Kit ab204726 provides a quick and robust method to measure the ability of endothelial cells to form three-dimensional tube-like structures *in vitro* in less than 18 hours. This tube formation assay provides a simple, easy to perform, qualitative tool for assessing angiogenesis.

Angiogenesis assay protocol summary:
- add extracellular matrix solution to empty culture plate and incubate for 1 hr at 37°C to allow the solution to form a gel
- plate cells onto the gel and add experimental treatment
- incubate cells for 4-18 hrs to allow tube formation
- remove incubation medium and wash cells / gel
- add staining dye and incubate for 30 min
- examine tube formation using light and fluorescence microscopy (green filter)

**Notes**

Angiogenesis is a physiological process that occurs during wound healing and normal development which involves the growth of new blood vessels from pre-existing vessels. These blood vessels form highly branched, tree-like tubular networks that ensure efficient and simultaneous transport of gases, liquids, nutrients, signaling molecules, and circulating cells between tissues and organs. Angiogenesis is complex and highly regulated, with tight coordination of cell proliferation, differentiation, migration, matrix adhesion, and cell-to-cell signaling. Angiogenesis is regulated by several factors, most importantly growth factors such as vascular endothelial growth factors (VEGFs) and platelet-derived growth factors (PDGFs).

**Platform**

Microplate reader

**Properties**

**Storage instructions**

Store at -20°C. Please refer to protocols.
Endothelial Cell (EA.hy926 Cells) Tube Formation

Phase contrast (a, c, e) and fluorescent images (b, d, f) of endothelial cells in a tissue culture plate. (a, b) Endothelial cells grown without the Extracellular Matrix Gel, (c, d) Tube formation of endothelial cells grown on Extracellular Matrix gel. (e, f) endothelial cells grown on Extracellular Matrix gel treated with Suramin (10 µmol/L). Images were taken using Nikon TE2000 microscope.

HVEC morphogenesis on Extracellular Matrix Gel. Cells (2 × 104) were plated per 1 cm² well precoated with Extracellular Matrix Gel and grown for 18 hours (A) in the specific medium alone (positive control) or containing (B) PMA 10 µmol/L.

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