

# Recombinant Human Angiopoietin 1, Myc-tagged

**Cat. No.** ANGPT1-115H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <b>Product Overview</b> | Recombinant Human Angiopoietin-1 (Ang-1), a 66 kDa protein consisting of 476 amino acid residues (N21-F496) is fused to an N-terminal myc-tag and produced in <i>insect cells</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>           | Insect Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Protein Length</b>   | 21-496 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>      | <p>The Angiopoietin (Ang) family of growth factors includes four members, all of which bind to the endothelial receptor tyrosine kinase Tie2. Two of the Angs, Ang-1 and Ang-4, activate the Tie2 receptor, whereas Ang-2 and Ang-3 inhibit Ang-1-induced Tie2 phosphorylation. Angiopoietin-1 (Ang-1) is a secreted growth factor which binds to and activates the Tie-2 receptor tyrosine kinase. The factor enhances endothelial cell survival and capillary morphogenesis, and also limits capillary permeability. Ang-2 binds the same receptor but fails to activate it: hence, it is a natural inhibitor of Ang-1. Ang-2 destabilizes capillary integrity, facilitating sprouting when ambient vascular endothelial growth factor (VEGF) levels are high, but causing vessel regression when VEGF levels are low. Tie-1 is a Tie-2 homologue but its ligands are unknown. Angiopoietin and Tie genes are expressed in the mammalian metanephros, the precursor of the adult kidney, where they may play a role in endothelial precursor growth. Tie-1-expressing cells can be detected in the metanephros when it first forms and, based on transplantation experiments, these precursors contribute to the</p> |

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | generation of glomerular capillaries. During glomerular maturation, podocyte-derived Ang-1 and mesangial-cell-derived Ang-2 may affect growth of nascent capillaries.                                                                                                                                                                                                                      |
| <b>Physical Appearance</b> | Sterile Filtered clear liquid formulation.                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purity</b>              | Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.                                                                                                                                                                                                                                                                                                    |
| <b>Formulation</b>         | The Angiopoietin 1 (0.111mg/ml) contains 50mM Tris-HCL, pH 7.5, 150mM NaCl, 0.05% CHAPS.                                                                                                                                                                                                                                                                                                   |
| <b>Biological Activity</b> | The biological activity was determined by the induction of endothelial cell sprouting as described in Korff et al., 2001.                                                                                                                                                                                                                                                                  |
| <b>Protein Content</b>     | Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 1.27 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of ANG-1 as a Reference Standard. |
| <b>Storage</b>             | ANG-1 although stable at 14°C 1 week, should be stored desiccated below -18°C. Please prevent freeze-thaw cycles.                                                                                                                                                                                                                                                                          |

## GENE INFORMATION

|                  |                                                                                 |
|------------------|---------------------------------------------------------------------------------|
| <b>Gene Name</b> | ANGPT1 angiopoietin 1 [ Homo sapiens ]                                          |
| <b>Synonyms</b>  | ANGPT1; angiopoietin 1; AGP1; AGPT; ANG1; KIAA0003, Ang1; Angiopoietin-1; ANG-1 |
| <b>Gene ID</b>   | 284                                                                             |

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| <b>mRNA Refseq</b>         | <a href="#">NM_001146</a>              |
| <b>Protein Refseq</b>      | <a href="#">NP_001137</a>              |
| <b>MIM</b>                 | <a href="#">601667</a>                 |
| <b>UniProt ID</b>          | <a href="#">Q15389</a>                 |
| <b>Chromosome Location</b> | 8q23.1                                 |
| <b>Pathway</b>             | Hemostasis; Signaling in Immune system |
| <b>Function</b>            | receptor binding                       |

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