

Recombinant Human Angiopoietin 1, Myc-tagged

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

SPECIFICATION

Product Overview	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> .
Species	Human
Source	Insect Cells
Protein Length	21-496 a.a.
Description	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

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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.
Physical Appearance	Sterile Filtered clear liquid formulation.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The Angiopoietin 1 (0.111mg/ml) contains 50mM Tris-HCL, pH 7.5, 150mM NaCl, 0.05% CHAPS.
Biological Activity	The biological activity was determined by the induction of endothelial cell sprouting as described in Korff et al., 2001.
Protein Content	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.
Storage	ANG-1 although stable at 14°C 1 week, should be stored desiccated below -18°C. Please prevent freeze-thaw cycles.

GENE INFORMATION

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

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mRNA Refseq	NM_001146
Protein Refseq	NP_001137
MIM	601667
UniProt ID	Q15389
Chromosome Location	8q23.1
Pathway	Hemostasis; Signaling in Immune system
Function	receptor binding

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