Active Recombinant Human ANGPT1 Protein, His-tagged, Biotinylated

Cat. No. ANGPT1-157H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ANGPT1(Ser20-Phe498) fused with His tag at C-terminal was expressed in NS0, Biotinylated.
Species	Human
Source	Mammalian Cells
ProteinLength	Ser20-Phe498
Description	Angiopoietin-1 (Ang-1) is a secreted glycoprotein that plays a critical role in the development and maintenance of the vascular system. It contains a N-terminal coiled-coil region and a C-terminal fibrinogen-like domain separated by a short flexible region. Mature human Angiopoietin-1 shares 97% amino acid sequence identity with mouse and rat Angiopoietin-1. It is expressed by vascular smooth muscle cells and pericytes as an approximately 70 kDa molecule that associates into disulfide-linked homotrimers, tetramers, and pentamers. Angiopoietin-1 binds and activates the receptor tyrosine kinase Tie-2, and its association into tetramers is important for full Tie-2 activation. Angiopoietin-1 ligation of Tie-2 on vascular endothelial cells (EC) induces the development and branching of blood vessels. In sub-confluent EC (i.e. during angiogenesis), Angiopoietin-1 promotes EC motility and Tie-2 localization at the trailing edge of the cell. In confluent EC (i.e. in homeostasis), multimeric Angiopoietin-1 enhances vascular integrity by promoting the in trans homotypic association of Tie-2 between EC or with the substratum. In addition, Angiopoietin-1

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	suppresses several VEGF-induced effects on the vasculature including endothelial permeability, stretch-induced release of Angiopoietin-2, and up-regulation of the leukocyte adhesion molecules VCAM-1, ICAM-1, and E-Selectin. Angiopoietin-1 also interacts with a variety of integrins and the extracellular matrix independently of Tie-2. These interactions support the adhesion, migration and stress resistance of EC, fibroblasts, and myocytes. Angiopoietin-1 can protect against pulmonary arterial hypertension, reduce the extent of fibrosis and remodeling in infarcted diabetic myocardium, and enhance tumor progression and metastasis.
Predicted N Terminal	Ser20
Form	Lyophilized from a 0.2 μm filtered solution in Tris-Citrate and NaCl with BSA as a carrier protein.
Bio-activity	Measured by its ability to inhibit serum deprivation induced apoptosis in HUVEC human umbilical vein endothelial cells. Kwak, H.J. et al. (1999) FEBS Letters 448:249. The ED50 for this effect is 10-40 ng/mL in the presence of 5 μg/mL of a cross-linking an
Molecular Mass	56 kDa (unlabeled)
Endotoxin	<1.0 EU per 1 μg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE with silver staining
Notes	Structure / Form: Oligomer
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution.

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	3 months, -20 to -70 centigrade under sterile
Reconstitution	Reconstitute at 10 µg/mL in PBS containing at least 0.1% human or bovine serum albumin.
Conjugation	Biotin

GENE INFORMATION

Gene Name	ANGPT1 angiopoietin 1 [Homo sapiens]
Official Symbol	ANGPT1
Synonyms	ANGPT1; angiopoietin 1; angiopoietin-1; Ang1; KIAA0003; ANG-1; AGP1; AGPT; ANG1;
Gene ID	284
mRNA Refseq	NM_001146
Protein Refseq	NP_001137
MIM	601667
UniProt ID	Q15389

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