

Active Recombinant Huma ANGPT2 Protein, His Tagged

Cat. No. ANGPT2-696H Lot. No. (See product label)

SPECIFICATION

Product Overview	Human Angiopoietin-2 Protein, His Tag is expressed from CHO cells. It contains AA Tyr 19-Phe 496 (Accession # O15123-1). This protein carries a polyhistidine tag at the C-terminus. Predicted N-terminus: Tyr 19
Species	Human
Source	CHO
ProteinLength	19-496 aa
Description	Angiopoietin-2 is also known as ANGPT2, AGPT2, ANG2, and is a secreted glycoprotein that plays a complex role in angiogenesis and inflammation. Ang2 is widely expressed during development, but it is restricted postnatally to highly angiogenic tissues such as the placenta, ovaries, and uterus. It is particularly abundant in vascular endothelial cells (EC) where it is stored in intracellular Weibel Palade bodies. Both Ang2 and the related Angiopoietin1 (Ang1) are ligands for the receptor tyrosine kinase Tie 2. Ang2 functions as a proangiogenic factor, although it can also induce EC death and vessel regression. Upon its release from quiescent EC, it regulates vascular remodeling by promoting EC survival, proliferation, and migration and destabilizing the interaction between EC and perivascular cells. Ang2 is required for postnatal vascular remodeling, and it cooperates with Ang1 during lymphatic vessel development. It mediates the upregulation of ICAM1 and VCAM1 on EC, which facilitates the adhesion of leukocytes during inflammation. Ang2 competitively inhibit Ang1-induced endothelial cell responses mediated by Tie2, and reduces

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vascular integrity. But the role of Ang2 is controversial since the opposite outcomes has been reported in other studies. Over-expression of Ang2 disrupts the vascular remodeling, induce endothelial cell apoptosis, and may play an important regulating role in tumor angiogenesis. Ang2 also promotes the neuronal differentiation and migration of subventricular zone progenitor cells.

Form	Lyophilized from 0.22 µm filtered solution in 20 mM MOPS, 150 mM NaCl, 5 mM CHAPS, pH7.3 with trehalose as protectant.
Bio-activity	Immobilized Human Angiopoietin-2 Protein, His Tag at 2 µg/mL (100 µL/well) can bind Human TIE2, Fc Tag with a linear range of 0.002-0.156 µg/mL.
Molecular Mass	The protein has a calculated MW of 56.8 kDa. The protein migrates as 60-80 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU/µg by the LAL method/rFC method.
Purity	>95% as determined by SDS-PAGE.
Storage	This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution. For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 µg/µL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

GENE INFORMATION

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Gene Name	ANGPT2 angiopoietin 2 [Homo sapiens (human)]
Official Symbol	ANGPT2
Synonyms	ANGPT2; angiopoietin 2; angiopoietin-2; Ang2; ANG-2; Tie2-ligand; angiopoietin-2B; angiopoietin-2a; ANG2; AGPT2;
Gene ID	285
mRNA Refseq	NM_001118887
Protein Refseq	NP_001112359
MIM	601922
UniProt ID	O15123

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