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ANG-1, Human recombinant protein
Angiopoietin-1
Catalog # PBV10750r

Specification

ANG-1, Human recombinant protein - Product info

Primary Accession	Q15389
Calculated MW	**60-70 kDa KDa**

ANG-1, Human recombinant protein - Additional Info

Gene ID	**284**
Gene Symbol	**ANGPT1**
Other Names	
Angiopoietin-1	
Gene Source	**Human**
Source	**HeLa cells**
Assay&Purity	**SDS-PAGE; ≥95%**
Assay2&Purity2	**HPLC;**
Recombinant	**Yes**
Sequence	**SNQRRSPENS GRRYNRIQHG QCAYTFILPE HDGNCRESTT DQYNTNALQR DAPHVEPDFS SQKLQHLEHV MENYTQWLQK LENYIVENMK SEMAQIQQNA VQNHTATMLE IGTSLLSQTA EQTRKLTDVE TQVLNQTSRL EIQLLENSLS TYKLEKQLLQ QTNEILKIHE KNSLLEHKIL EMEGKHKEEL DTLKEEKENL QGLVTRQTYI IQELEKQLNR ATTNNSVLQK QQLELMDTVH NLVNLCTKEG VLLKGGKREE EKPFRDCADV YQAGFNKSGI YTIYINNMPE PKKVFCNMDV NGGGWTVIQH REDGSLDFQR GWKEYKMGFG NPSGEYWLGN EFIFAITSQR QYMLRIELMD WEGNRAYSQY DRFHIGNEKQ NYRLYLKGHT GTAGKQSSLI LHGADFSTKD ADNDNCMCKC ALMLTGGWWF DACGPSNLNG MFYTAGQNHG KLNGIKWHYF KGPSYSLRST TMMIRPLDFH HHHHH**

Target/Specificity
ANG-1

Application Notes
Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Format
Lyophilized powder

Storage

-20°C; Sterile filtered through a 0.2 micron filter. Lyophilized from 20 mM Sodium Phosphate, pH 7.5, 200 mM NaCl, 5% Trehalose.

ANG-1, Human recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ANG-1, Human recombinant protein - Images

ANG-1, Human recombinant protein - Background

Angiopoietin-1 (Ang-1) is a secreted ligand for Tie-2, a tyrosine-kinase receptor expressed primarily on vascular endothelial cells and early hematopoietic cells. Ang-1/ Tie-2 signaling promotes angiogenesis during the development, remodeling, and repair of the vascular system. Transgenic mice lacking expression of either Ang-1 or Tie-2 fail to develop a fully functional cardiovascular system and die before birth. Postnatally, the angiogenic activity of Ang-1/Tie-2 is required during normal tissue repair and remodeling of the female endometrium in the menstrual cycle. Ang-1/Tie-2 signaling appears to be regulated by Angiopoietin-2 (Ang-2), a natural antagonist for Tie-2 that exerts its effects through an internal autocrine loop mechanism. In addition to suppressing endothelial cell activation by inhibiting the expression of adhesion and inflammatory molecules, Ang-1 enhances endothelial cell survival and capillary morphogenesis, and lessens capillary permeability. As such, Ang-1 has a potential to become an effective therapeutic agent for treating various endothelium disorders, including several severe human pulmonary diseases. The efficacy of cell-based Ang-1 gene therapy for acute lung injury (ALI) has recently been studied in a rat model of ALI. The results of this study show that such therapy can markedly improve lung condition and suggest that Ang-1 therapy may represent a potential new strategy for the treatment and/or prevention of acute respiratory distress injury (ARDI), a significant cause of morbidity and mortality in critically ill patients. Recombinant human ANG-1, derived from HeLa cells, is a C-terminal histidine tagged glycoprotein which migrates with an apparent molecular mass of 60.0 – 70.0 kDa by SDS-PAGE under reducing conditions. Sequencing analysis shows N-terminal sequences starting with Ser-20 and with Asp-70 of the 498 amino acid precursor protein.

ANG-1, Human recombinant protein - References

Davis S.,et al.Cell 87:1161-1169(1996).
Nakatsukasa M.,et al.Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
Shan Z.X.,et al.Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
Nomura N.,et al.DNA Res. 1:27-35(1994).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).