

Catalog # PBV10750r

ANG-1, Human recombinant protein Angiopoietin-1

Specification

ANG-1, Human recombinant protein - Product info

Primary Accession Calculated MW <u>Q15389</u> 60-70 kDa KDa

ANG-1, Human recombinant protein - Additional Info

Gene ID Gene Symbol **Other Names** Angiopoietin-1

Gene Source Source Assay&Purity Assay2&Purity2 Recombinant Sequence 284 ANGPT1

Human **HeLa cells SDS-PAGE;** ≥95% HPLC; Yes **SNORRSPENS GRRYNRIOHG QCAYTFILPE HDGNCRESTT DQYNTNALQR DAPHVEPDFS** SOKLOHLEHV MENYTOWLOK LENYIVENMK SEMAQIQONA VONHTATMLE IGTSLLSQTA EQTRKLTDVE TOVLNOTSRL 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 MFYTAGONHG 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.

- <u>Western Blot</u>
- Blocking Peptides
- <u>Dot Blot</u>
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

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).