ANG-1 Human HeLa cells

Product Data Sheet

Type: Recombinant
Source: HeLa cells
Species: Human
Other names: Angiopoietin-1, ANGPT1, KIAA0003

Cat. No.:

RBG10057005	(5 µg)
RBG10057020	(20 µg)
RBG10057100	(100 µg)

Description

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 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. The calculated molecular weight of Recombinant Human ANG-1 is 56.3 kDa.

Research topic

Apoptosis, Bone and cartilage metabolism, Cardiovascular disease

Amino Acid Sequence

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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
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Source

HeLa cells

Purity

95%

Biological Activity

Determined by the dose-dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC).

Storage, Stability/Shelf Life

-20°C

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