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Recombinant Human ANG-1
Catalog # PBG10011

Specification

Recombinant Human ANG-1 - Product Information

Recombinant Human ANG-1 - Additional Information

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 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 (1). 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.

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

Authenticity
Verified by N-terminal and Mass Spectrometry analyses (when applicable).

Endotoxin
Endotoxin level is <0.1 ng/ µg of protein (<1EU/ µg).

Protein Content
Verified by UV Spectroscopy and/or SDS-PAGE gel.

Storage
-20°C

Precautions
Recombinant Human ANG-1 is for research use only and not for use in diagnostic or therapeutic procedures.

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Recombinant Human ANG-1 - 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

Recombinant Human ANG-1 - Images