10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

ANGPT1 Antibody (CT)

Rabbit Polyclonal Antibody

Catalog # ABV11310

Specification

ANGPT1 Antibody (CT) - Product Information

Application	**WB**
Primary Accession	Q15389
Reactivity	**Human, Mouse, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**57513**

ANGPT1 Antibody (CT) - Additional Information

Gene ID 284

Positive Control	**Western blot: NCI-H292 cell lysate.**
Application & Usage	**Western blot: ~1:1000.**

Other Names
ANGPT1; KIAA0003; Angiopoietin-1

Target/Specificity
ANGPT1

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µl of antibody in PBS with 0.09% (W/V) sodium azide

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
ANGPT1 Antibody (CT) is for research use only and not for use in diagnostic or therapeutic procedures.

ANGPT1 Antibody (CT) - Protein Information

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Name ANGPT1

Synonyms KIAA0003

Function
Binds and activates TEK/TIE2 receptor by inducing its dimerization and tyrosine phosphorylation. Plays an important role in the regulation of angiogenesis, endothelial cell survival, proliferation, migration, adhesion and cell spreading, reorganization of the actin cytoskeleton, but also maintenance of vascular quiescence. Required for normal angiogenesis and heart development during embryogenesis. After birth, activates or inhibits angiogenesis, depending on the context. Inhibits angiogenesis and promotes vascular stability in quiescent vessels, where endothelial cells have tight contacts. In quiescent vessels, ANGPT1 oligomers recruit TEK to cell- cell contacts, forming complexes with TEK molecules from adjoining cells, and this leads to preferential activation of phosphatidylinositol 3-kinase and the AKT1 signaling cascades. In migrating endothelial cells that lack cell-cell adhesions, ANGT1 recruits TEK to contacts with the extracellular matrix, leading to the formation of focal adhesion complexes, activation of PTK2/FAK and of the downstream kinases MAPK1/ERK2 and MAPK3/ERK1, and ultimately to the stimulation of sprouting angiogenesis. Mediates blood vessel maturation/stability. Implicated in endothelial developmental processes later and distinct from that of VEGF. Appears to play a crucial role in mediating reciprocal interactions between the endothelium and surrounding matrix and mesenchyme.

Cellular Location
Secreted.

ANGPT1 Antibody (CT) - 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

ANGPT1 Antibody (CT) - Images

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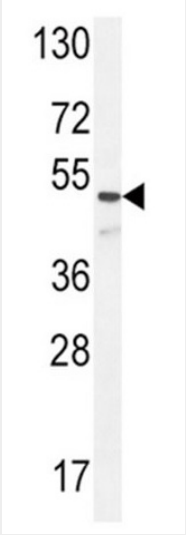

Western blot analysis of NCI-H292 cell line lysate. (35 µg protein).

ANGPT1 Antibody (CT) - 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.