10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Human CellExp Angiopoietin-2, human recombinant protein

ANGPT2, AGPT2, ANG2, Angiopoietin-2
Catalog # PBV11018r

Specification

Human CellExp Angiopoietin-2, human recombinant protein - Product info

Primary Accession	O15123
Calculated MW	**This protein is fused with a 6×his tag at C-terminus and the protein has a calculated MW of 50.1 kDa. The predicted N-terminus is Asp68 & Tyr19. DTT-reduced protein migrates as 66-90 kDa in SDS-PAGE due to glycosylation. KDa**

Human CellExp Angiopoietin-2, human recombinant protein - Additional Info

Gene ID	**285**
Gene Symbol	**ANGPT1**

Other Names
ANGPT2, AGPT2, ANG2, Angiopoietin-2

Gene Source	**Human**
Source	**HEK293 cells**
Assay&Purity	**SDS-PAGE; ≥90%**
Assay2&Purity2	**N/A;**
Recombinant	**Yes**
Results	**Measured by its ability to activate Tie2 in human Tie2 transfected C6 rat glial cells. 0.2 μg/mL of rhANGPT2 significantly induces phosphorylation of human Tie2. Measured in a competitive binding assay. When Tie2 Fc Chimera is immobilized, rhAng2 inhibits binding of biotinylated rhAng-2.**

Target/Specificity
Angiopoietin-2

Application Notes
Centrifuge the vial prior to opening. Reconstitute in sterile PBS, pH 7.4 to a concentration of 50 μg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 month. For extended storage, it is recommended to store at -20°C.

Format
Lyophilized

Storage
-20°C; Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Generally 5-8% Mannitol or trehalose is added as a protectant before lyophilization.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Human CellExp Angiopoietin-2, 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

Human CellExp Angiopoietin-2, human recombinant protein - Images

Human CellExp Angiopoietin-2, human recombinant protein - Background

Angiopoietin-2, also known as ANGPT2, AGPT2, ANG2, and is a secreted glycoprotein that plays a complex role in angiogenesis and inflammation. Ang2 is widely expressed during development, but it is restricted postnatally to highly angiogenic tissues such as the placenta, ovaries, and uterus. It is particularly abundant in vascular endothelial cells (EC) where it is stored in intracellular Weibel Palade bodies. Both Ang2 and the related Angiopoietin1 (Ang1) are ligands for the receptor tyrosine kinase Tie 2. Ang2 functions as a proangiogenic factor, although it can also induce EC death and vessel regression. Upon its release from quiescent EC, it regulates vascular remodeling by promoting EC survival, proliferation, and migration and destabilizing the interaction between EC and perivascular cells. Ang2 is required for postnatal vascular remodeling, and it cooperates with Ang1 during lymphatic vessel development. It mediates the upregulation of ICAM1 and VCAM1 on EC, which facilitates the adhesion of leukocytes during inflammation. Ang2 competitively inhibit Ang1-induced endothelial cell responses mediated by Tie2, and reduces vascular integrity. But the role of Ang2 is controversial since the opposite outcomes have been reported in other studies. Over-expression of Ang2 disrupts the vascular remodeling, induces endothelial cell apoptosis, and may play an important regulating role in tumor angiogenesis. Ang2 also promotes the neuronal differentiation and migration of sub ventricular zone progenitor cells.

Human CellExp Angiopoietin-2, human recombinant protein - References

Maisonpierre P.C.,et al.Science 277:55-60(1997).
Tanaka S.,et al.J. Clin. Invest. 103:341-345(1999).
Kim I.,et al.J. Biol. Chem. 275:18550-18556(2000).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Nusbaum C.,et al.Nature 439:331-335(2006).