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Functional Angiopoietin-2 Antibody, mAb (recombinant) (blocking)

Catalog # ADP0006

Specification

Functional Angiopoietin-2 Antibody, mAb (recombinant) (blocking) - Product Information

Application	**E**
Primary Accession	O35608
Reactivity	**Human, Mouse**
Host	**CHO Cells**
Clonality	**Monoclonal**
Isotype	**Mouse IgG2bλ.**
Gene Source	**Human**
Application Note	**,E,Functional Applicational,Inhibits the binding of mouse angiopoietin-2 to mouse Tie-2. ND50= 50-60ng/ml (for 10ng/ml of mouse Angiopoietin-2) ,Inhibits the binding of human angiopoietin-2 to human Tie-2. ND50= 8-12ng/ml (for 10ng/ml of human Angiopoietin-2) ,ND50 50% neutralizing dose of antibody for a given concentration of ligand (here Angiopoietin-2).**
Calculated MW	**56576**
Description	**anti-Angiopoietin-2, mAb (rec.) (blocking) (Angy-2-1) is composed of human variable regions (VH and VL) (λ-chain) of immunoglobulin fused to the mouse IgG2b Fc domain.**

Functional Angiopoietin-2 Antibody, mAb (recombinant) (blocking) - Additional Information

Gene ID 11601

Other Names
Ang-2; Ang2; Angpt2; Agpt2

Target/Specificity
Recognizes human and mouse angiopoietin-2. Does not detect human angiopoietin-1.

Format
Liquid. In PBS containing 10% glycerol and 0.02% sodium azide.

Reconstitution & Storage
Stable for at least 1 year after receipt when stored at -20°C.

Precautions
Functional Angiopoietin-2 Antibody, mAb (recombinant) (blocking) is for research use only and not for use in diagnostic or therapeutic procedures.

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Functional Angiopoietin-2 Antibody, mAb (recombinant) (blocking) - Protein Information

Name Angpt2

Synonyms Agpt2

Function
Binds to TEK/TIE2, competing for the ANGPT1 binding site, and modulating ANGPT1 signaling (By similarity). Can induce tyrosine phosphorylation of TEK/TIE2 in the absence of ANGPT1 (By similarity). In the absence of angiogenic inducers, such as VEGF, ANGPT2-mediated loosening of cell-matrix contacts may induce endothelial cell apoptosis with consequent vascular regression (By similarity). In concert with VEGF, it may facilitate endothelial cell migration and proliferation, thus serving as a permissive angiogenic signal (By similarity). Involved in the regulation of lymphangiogenesis (PubMed:28179430, PubMed:32908006).

Cellular Location
Secreted {ECO:0000250|UniProtKB:O15123}.

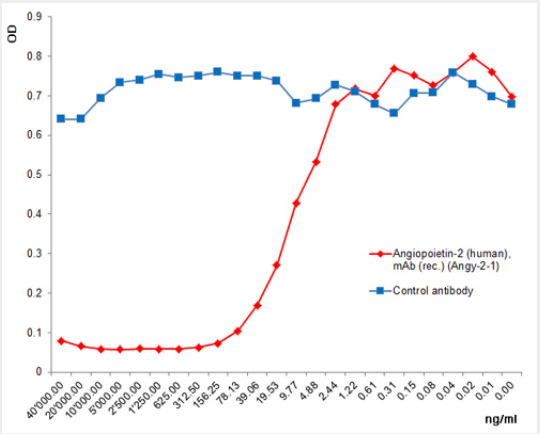
Tissue Location
Expressed in the ovary, uterus and placenta.

Functional Angiopoietin-2 Antibody, mAb (recombinant) (blocking) - 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

Functional Angiopoietin-2 Antibody, mAb (recombinant) (blocking) - Images



Binding of human Angiopoietin-2 to Tie-2 (human):Fc is inhibited by the antibody anti-Angiopoietin-2, mAb (rec.) (blocking) (Angy-2-1).

Methods:Tie-2 (h):Fc was coated on an ELISA plate at 1 µg/ml. anti-Angiopoietin-2, mAb (rec.) (blocking) (Angy-2-1) or an unrelated mAb (recombinant) (Control) were added (starting at 40 µg/ml with a twofold serial dilution) together with 20ng/ µl of Angiopoietin-2 (human). After incubation for 1h at RT, the binding was detected using an anti-FLAG antibody (HRP).

Functional Angiopoietin-2 Antibody, mAb (recombinant) (blocking) - Background

Angiopoietin-1 (Ang-1) and Angiopoietin-2 (Ang-2) are closely related secreted ligands which bind with similar affinity to Tie-2. Tie-2 and angiopoietins have been shown to play critical roles in embryogenic angiogenesis and in maintaining the integrity of the adult vasculature. Ang-1 activates Tie-2 signaling on endothelial cells to promote chemotaxis, cell survival, cell sprouting, vessel growth and stabilization. Ang-2 has been identified as a secreted protein ligand of Tie-2 and has alternatively been reported to be an antagonist for Ang-1 induced Tie-2 signaling as well as an agonist for Tie-2 signaling, depending on the cell context. anti-Angiopoietin-2, mAb (rec.) (blocking) (Angy-2-1) is an antibody developed by antibody phage display technology using a human naive antibody gene library. These libraries consist of scFv (single chain fragment variable) composed of VH (variable domain of the human immunoglobulin heavy chain) and VL (variable domain of the human immunoglobulin light chain) connected by a polypeptide linker. The antibody fragments are displayed on the surface of filamentous bacteriophage (M13). This scFv was selected by affinity selection on antigen in a process termed panning. Multiple rounds of panning are performed to enrich for antigen-specific scFv-phage. Monoclonal antibodies are subsequently identified by screening after each round of selection. The selected monoclonal scFv is cloned into an appropriate vector containing a Fc portion of interest and then produced in mammalian cells to generate an IgG like scFv-Fc fusion protein.