Mouse Angiopoietin-3 Antibody

Monoclonal Rat IgG_{2A} Clone # 113538

Catalog Number: MAB1361

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Angiopoietin-3 in direct ELISAs and Western blots.
Source	Monoclonal Rat IgG_{2A} Clone # 113538
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse Angiopoietin-3 Ala21-Ala509 Accession # Q9WVH6
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Mouse Angiopoietin-3 (ANG-3) (1), is a secreted glycoprotein belonging to the angiopoietin family. It has the characteristic structural motifs of angiopoietins including the coiled-coiled domain near the amino-terminus and a fibrinogen-like domain at the C-terminus. Mouse ANG-3 cDNA encodes a 509 amino acid (aa) precursor protein with a 21 aa signal peptide. It shares 47%, 46% and 54% aa sequence identity with mouse ANG-1, mouse ANG-2 and human ANG-4, respectively. Although the sequence homology is much higher between the human and mouse counterparts for ANG-1 (97%) and ANG-2 (85%), mouse ANG-3 is believed to be an ortholog of human ANG-4 based on chromosomal localization studies (1, 2). Human ANG-4 is highly expressed in lung and in cultured human umbilical vein endothelial cells (HUVECs). In contrast, mouse ANG-3 is expressed in multiple mouse tissues. Human ANG-4 is an agonist that can bind and activate Tie-2, a receptor tyrosine kinase with immunoglobulin and epidermal growth factor homology domains expressed primarily on endothelial cells and early hematopoietic cells (2, 3). Mouse ANG-3 has been reported to be a Tie-2 antagonist. It is likely that mouse ANG-3, like ANG-2, may exert agonist or antagonist activities depending on the cell context (1, 3, 4).

References:

1. Valenzuela, D.M. *et al.* (1999) Proc. Natl. Acad. Sci. USA **96**:1904.
2. Nishimura, M. *et al.* (1999) FEBS Lett. **448**:254.
3. Jones, N. *et al.* (2001) Nat. Rev. Mol. Cell Biol. **2**:257.
4. Teichert-Kuliszewska, K. *et al.* (2001) Cardiovasc. Res. **49**:659.

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