SANTA CRUZ BIOTECHNOLOGY, INC.

Ang-4 (A-6): sc-377497



BACKGROUND

Angiopoietin-1 (Ang-1) is a secreted ligand for Tie-2, a cell surface receptor tyrosine kinase expressed in endothelial and hemopoietic cells. Ang-1 is an angiogenic factor that mediates blood vessel maturation and may be involved in endothelial development. A related protein, angiopoietin-2 (Ang-2), is a naturally occurring antagonist of Ang-1 activation of Tie-2. In adult tissue, Ang-2 expression is restricted to sites of vascular remodeling. Ang-3 and Ang-4 represent the mouse and human counterparts of the same gene locus. The structural divergence of Ang-3 and Ang-4 cause their divergent functions. Ang-3 and Ang-4 have very different distributions in their respective species, and Ang-3 appears to act as an antagonist while Ang-4 appears to function as an agonist. Ang-3 and Ang-4 share all the main structural characteristics of Ang-1 and Ang-2 and are homologous throughout the signal peptide, N-terminal region, coiled-coil segment and Fibrinogen-like domain.

CHROMOSOMAL LOCATION

Genetic locus: ANGPT4 (human) mapping to 20p13; Angpt4 (mouse) mapping to 2 G3.

SOURCE

Ang-4 (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 5-41 near the N-terminus of Ang-4 of mouse origin.

PRODUCT

Each vial contains 200 μg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377497 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Ang-4 (A-6) is recommended for detection of Ang-4 (formerly designated Ang-3) of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ang-4 siRNA (h): sc-39309, Ang-4 siRNA (m): sc-39310, Ang-4 shRNA Plasmid (h): sc-39309-SH, Ang-4 shRNA Plasmid (m): sc-39310-SH, Ang-4 shRNA (h) Lentiviral Particles: sc-39309-V and Ang-4 shRNA (m) Lentiviral Particles: sc-39310-V.

Molecular Weight of Ang-4: 58 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA





Ang-4 (A-6): sc-377497. Western blot analysis of Ang-4 expression in U-251-MG whole cell lysate.

Ang-4 (A-6): sc-377497. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Lee, S.H., et al. 2020. Change of Ras and its guanosine triphosphatases (GTPases) during development and regression in bovine corpus luteum. Theriogenology 144: 16-26.
- Mun, S., et al. 2022. Transcriptome profile of membrane and extracellular matrix components in ligament-fibroblastic progenitors and cementoblasts differentiated from human periodontal ligament cells. Genes 13: 659.
- Fu, Y., et al. 2022. Paneth cells protect against acute pancreatitis via modulating gut microbiota dysbiosis. mSystems 7: e0150721.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.