

Ang-1 (D-6): sc-518157

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 glycosylated and has a fibrinogen-like domain at the carboxy terminus and coiled-coil regions in the amino terminus. 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-1 and Ang-2 are expressed in human malignant glioma. Ang-3 is a secretory protein expressed in adult human adrenal gland, placenta, lung, cultured human umbilical vein endothelial cells, thyroid gland, heart and small intestine. It acts as an antagonist. Ang-4 is expressed in heart and acts as an agonist.

REFERENCES

- Dumont, D.J., et al. 1992. Tek, a novel tyrosine kinase gene located on mouse chromosome 4, is expressed in endothelial cells and their presumptive precursors. *Oncogene* 7: 1471-1480.
- Sato, T.N., et al. 1993. Tie-1 and Tie-2 define another class of putative receptor tyrosine kinase genes expressed in early embryonic vascular system. *Proc. Natl. Acad. Sci. USA* 90: 9355-9358.
- Dumont, D.J., et al. 1993. The endothelial-specific receptor tyrosine kinase, Tek, is a member of a new subfamily of receptors. *Oncogene* 8: 1293-1301.
- Davis, S., et al. 1996. Isolation of angiopoietin-1, a ligand for the TIE2 receptor, by secretion-trap expression cloning. *Cell* 87: 1161-1169.
- Maisonpierre, P.C., et al. 1997. Angiopoietin-2, a natural antagonist for Tie2 that disrupts *in vivo* angiogenesis. *Science* 277: 55-60.
- Kim, I., et al. 1999. Molecular cloning and characterization of a novel angiopoietin family protein, angiopoietin-3. *FEBS Lett.* 443: 353-356.

CHROMOSOMAL LOCATION

Genetic locus: ANGPT1 (human) mapping to 8q23.1.

SOURCE

Ang-1 (D-6) is a mouse monoclonal antibody raised against amino acids 400-498 of Ang-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ang-1 (D-6) is available conjugated to agarose (sc-518157 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518157 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518157 PE), fluorescein (sc-518157 FITC), Alexa Fluor[®] 488 (sc-518157 AF488), Alexa Fluor[®] 546 (sc-518157 AF546), Alexa Fluor[®] 594 (sc-518157 AF594) or Alexa Fluor[®] 647 (sc-518157 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518157 AF680) or Alexa Fluor[®] 790 (sc-518157 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Ang-1 (D-6) is recommended for detection of Ang-1 of 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); may cross-react with Ang-2 and Ang-4.

Suitable for use as control antibody for Ang siRNA (h): sc-37198, Ang shRNA Plasmid (h): sc-37198-SH and Ang shRNA (h) Lentiviral Particles: sc-37198-V.

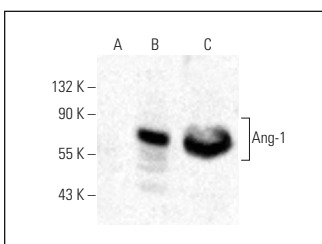
Molecular Weight of Ang-1: 70 kDa.

Positive Controls: Ang-1 (h2): 293T Lysate: sc-176832 or HUV-EC-C whole cell lysate: sc-364180.

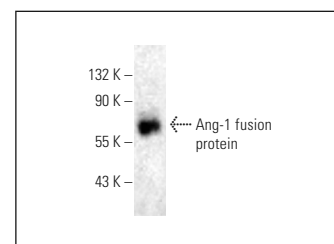
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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-1 (D-6): sc-518157. Western blot analysis of Ang-1 expression in non-transfected 293T: sc-117752 (A), human Ang-1 transfected 293T: sc-176832 (B) and HUV-EC-C (C) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Ang-1 (D-6): sc-518157. Western blot analysis of human recombinant Ang-1 fusion protein. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

STORAGE

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

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.

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