SANTA CRUZ BIOTECHNOLOGY, INC.

Angptl1 (A-5): sc-365146

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The Power to Question

BACKGROUND

Angptl1 (angiopoietin-like 1), also known as angioarrestin, ARP1, ANGPT3 or previously known as angiopoietin 3 (ANG3), is a member of the angiopoietin-like family. It is highly expressed in adult tissues, particularly adrenal gland, thyroid, placenta and small intestine. Angptl1 exists as a disulfide-linked dimer and shares 45.1% identity with Ang-1 and 59% identity with Angptl2. Angptl1 consists of an N-terminus with a coiled-coil domain, potential glycosylation sites and a C-terminus with a fibrinogen-like domain. It is a secreted protein but does not function as a growth factor in endothelial cells. Angptl1 plays a distinct role in the regulation of angiogenesis; inhibiting proliferation, migration, tube formation and endothelial cell adhesion. To exert this inhibitory activity, Angptl1 is speculated to interact with a receptor on endothelial cells. In a wide variety of tumor tissues, Angptl1 expression is down-regulated suggesting that a major function of this protein involves its antiangiogenic properties.

REFERENCES

1. Kim, I., et al. 1999. Molecular cloning, expression, and characterization of angiopoietin-related protein. angiopoietin-related protein induces endothelial cell sprouting. J. Biol. Chem. 274: 26523-26528.
2. Kim, I., et al. 1999. Molecular cloning and characterization of a novel angiopoietin family protein, angiopoietin-3. FEBS Lett. 443: 353-356.
3. Dhanabal, M., et al. 2002. Angioarrestin: an antiangiogenic protein with tumor-inhibiting properties. Cancer Res. 62: 3834-3841.
4. Lee, H.J., et al. 2004. Biological characterization of angiopoietin-3 and angiopoietin-4. FASEB J. 18: 1200-1208.
5. Kubota, Y., et al. 2005. Cooperative interaction of angiopoietin-like proteins 1 and 2 in zebrafish vascular development. Proc. Natl. Acad. Sci. USA 102: 13502-13507.
6. Kubota, Y., et al. 2005. Isolation and expression patterns of genes for three angiopoietin-like proteins, Angptl1, 2 and 6 in zebrafish. Gene Expr. Patterns 5: 679-685.
7. Oike, Y., et al. 2005. Angiopoietin-like proteins: potential new targets for metabolic syndrome therapy. Trends Mol. Med. 11: 473-479.
8. Bouïs, D., et al. 2006. A review on pro- and anti-angiogenic factors as targets of clinical intervention. Pharmacol. Res. 53: 89-103.

CHROMOSOMAL LOCATION

Genetic locus: ANGPTL1 (human) mapping to 1q25.2; Angptl1 (mouse) mapping to 1 H1.

SOURCE

Angptl1 (A-5) is a mouse monoclonal antibody raised against amino acids 156-315 mapping within an internal region of Angptl1 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.

APPLICATIONS

Angptl1 (A-5) is recommended for detection of Angptl1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 Angptl1 siRNA (h): sc-88171, Angptl1 siRNA (m): sc-141061, Angptl1 shRNA Plasmid (h): sc-88171-SH, Angptl1 shRNA Plasmid (m): sc-141061-SH, Angptl1 shRNA (h) Lentiviral Particles: sc-88171-V and Angptl1 shRNA (m) Lentiviral Particles: sc-141061-V.

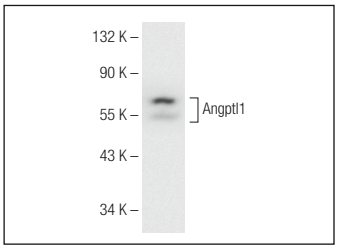
Molecular Weight of Angptl1: 57 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

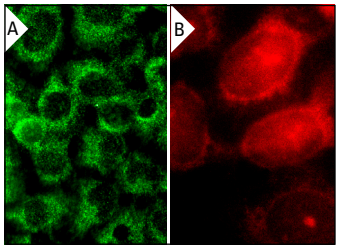
RECOMMENDED SUPPORT REAGENTS

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



Angptl1 (A-5): sc-365146. Western blot analysis of Angptl1 expression in Jurkat whole cell lysate.



Angptl1 (A-5): sc-365146. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**,**B**).

SELECT PRODUCT CITATIONS

1. Sun, R., et al. 2020. Angptl1 is a potential biomarker for differentiated thyroid cancer diagnosis and recurrence. Oncol. Lett. 20: 240.

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.