SANTA CRUZ BIOTECHNOLOGY, INC.

Thrombospondin 1 (MS-421): sc-81755

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The thrombospondin proteins (TSP 1-4) compose a family of glycoproteins that are involved in cell-to-cell and cell-to-matrix signaling. These extracellular, cell surface proteins form complexes of both homo- and heteromultimers. Thrombospondins play a role in development, aggregation of platelets, adhesion and migration of cells, and progression of cells through the growth cycle. Thrombospondin 1 is released from platelets in response to Thrombin stimulation and is a transient component of the extracellular matrix of developing and repairing tissues. Thrombospondin 2 shares a high degree of homology with Thrombospondin 1 and is thought to have overlapping but unique functions. Thrombospondin 3 is a developmentally regulated heparin binding protein. Thrombospondin 4 is neuronally expressed and stimulates neurite outgrowth.

REFERENCES

1. Mosher, D.F. 1990. Physiology of thrombospondin. Annu. Rev. Med. 41: 85-97.
2. Bornstein, P., et al. 1991. A second, expressed thrombospondin gene (Thbs2) exists in the mouse genome. J. Biol. Chem. 266: 12821-12824.
3. LaBell, T.L., et al. 1992. Thrombospondin 2: partial cDNA sequence, chromosome location and expression of a second member of the thrombospondin gene family in humans. Genomics 12: 421-429.
4. O'Rourke, K.M., et al. 1992. Thrombospondin 1 and Thrombospondin 2 are expressed as both homo- and heterotrimers. J. Biol. Chem. 267: 24921-24924.
5. Jahav, J. 1993. The functions of thrombospondin and its involvement in physiology and pathophysiology. Biochem. Biophys. Acta 1182: 1-14.
6. Arber, S. and Caroni, P. 1995. Thrombospondin 4, an extracellular matrix protein expressed in the developing and adult nervous system, promotes neurite outgrowth. J. Cell Biol. 131: 1083-1094.
7. Qabar, A., et al. 1995. Thrombospondin 3 is a pentameric molecule held together by interchain disulfide linkage involving two Cysteine residues. J. Biol. Chem. 270: 12725-12729.

CHROMOSOMAL LOCATION

Genetic locus: THBS1 (human) mapping to 15q14; Thbs1 (mouse) mapping to 2 E5.

SOURCE

Thrombospondin 1 (MS-421) is a mouse monoclonal antibody raised against reduced and alkylated Thrombospondin 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Thrombospondin 1 (MS-421) is recommended for detection of reduced and non-reduced Thrombospondin 1 of mouse, rat, human, equine, bovine and porcine 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

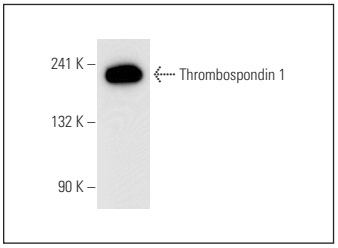
Suitable for use as control antibody for Thrombospondin 1 siRNA (h): sc-36665, Thrombospondin 1 siRNA (m): sc-36666, Thrombospondin 1 siRNA (r): sc-270413, Thrombospondin 1 shRNA Plasmid (h): sc-36665-SH, Thrombospondin 1 shRNA Plasmid (m): sc-36666-SH, Thrombospondin 1 shRNA Plasmid (r): sc-270413-SH, Thrombospondin 1 shRNA (h) Lentiviral Particles: sc-36665-V, Thrombospondin 1 shRNA (m) Lentiviral Particles: sc-36666-V and Thrombospondin 1 shRNA (r) Lentiviral Particles: sc-270413-V.

Molecular Weight of various forms of Thrombospondin 1: 165-198 kDa.

Molecular Weight of Thrombospondin 1 homotrimer: 420 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263, Saos-2 cell lysate: sc-2235 or 3611-RF whole cell lysate: sc-2215.

DATA



Thrombospondin 1 (MS-421): sc-81755. Western blot analysis of Thrombospondin 1 expression in CCD-1064Sk whole cell lysate.

SELECT PRODUCT CITATIONS

1. Dogar, A.M., et al. 2011. Suppression of latent transforming growth factor (TGF)-β1 restores growth inhibitory TGF-β signaling through microRNAs. J. Biol. Chem. 286: 16447-16458.
2. Dogar, A.M., et al. 2014. Multiple microRNAs derived from chemically synthesized precursors regulate thrombospondin 1 expression. Nucleic Acid Ther. 24: 149-159.

RESEARCH USE

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

CONJUGATES

See **Thrombospondin 1 (C-8): sc-393504** for Thromnospondin 1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.