SANTA CRUZ BIOTECHNOLOGY, INC.

Thrombospondin 4 (G-6): sc-55464

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Thrombospondin proteins (TSP 1-5) 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. O'Rourke, K.M., Laherty, C.D. and Dixit, V.M. 1992. Thrombospondin 1 and Thrombospondin 2 are expressed as both homo- and heterotrimers. J. Biol. Chem. 267: 24921-24924.
4. 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.
5. Jahav, J. 1993. The functions of Thrombospondin and its involvement in physiology and pathophysiology. Biochem. Biophys. Acta 1182: 1-14.
6. 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.
7. 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.
8. Adams, J.C. 1997. Thrombospondin 1. Int. J. Biochem. Cell Biol. 29: 861-865.

CHROMOSOMAL LOCATION

Genetic locus: THBS4 (human) mapping to 5q14.1.

SOURCE

Thrombospondin 4 (G-6) is a mouse monoclonal antibody raised against amino acids 141-240 of Thrombospondin 4 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.

APPLICATIONS

Thrombospondin 4 (G-6) is recommended for detection of Thrombospondin 4 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).

Suitable for use as control antibody for Thrombospondin 4 siRNA (h): sc-37171, Thrombospondin 4 shRNA Plasmid (h): sc-37171-SH and Thrombospondin 4 shRNA (h) Lentiviral Particles: sc-37171-V.

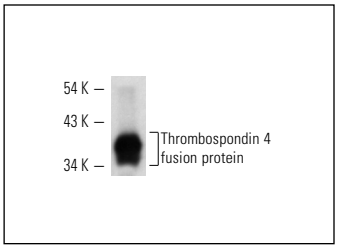
Molecular Weight of Thrombospondin 4: 135 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

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, TBS Blotto A Blocking Reagent: sc-2333 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



Thrombospondin 4 (G-6): sc-55464. Western blot analysis of human recombinant Thrombospondin 4 fusion protein.

SELECT PRODUCT CITATIONS

1. Yu, H., et al. 2013. Interleukin-8 regulates endothelial permeability by down-regulation of tight junction but not dependent on integrins induced focal adhesions. Int. J. Biol. Sci. 9: 966-979.

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.