SANTA CRUZ BIOTECHNOLOGY, INC.

Thrombospondin 4 (F-7): sc-390734

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 hetero-multimers. 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.

CHROMOSOMAL LOCATION

Genetic locus: THBS4 (human) mapping to 5q14.1; Thbs4 (mouse) mapping to 13 C3.

SOURCE

Thrombospondin 4 (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 930-961 of Thrombospondin 4 of human 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-390734 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Thrombospondin 4 (F-7) is recommended for detection of Thrombospondin 4 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 Thrombospondin 4 siRNA (h): sc-37171, Thrombospondin 4 siRNA (m): sc-43194, Thrombospondin 4 shRNA Plasmid (h): sc-37171-SH, Thrombospondin 4 shRNA Plasmid (m): sc-43194-SH, Thrombospondin 4 shRNA (h) Lentiviral Particles: sc-37171-V and Thrombospondin 4 shRNA (m) Lentiviral Particles: sc-43194-V.

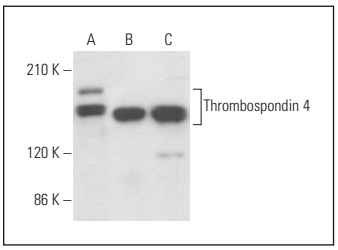
Molecular Weight of Thrombospondin 4: 135 kDa.

Positive Controls: mouse testis extract: sc-2405, Hep G2 cell lysate: sc-2227 or rat testis extract: sc-2400.

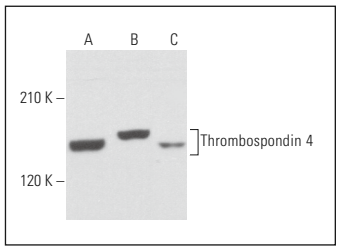
RECOMMENDED SUPPORT REAGENTS

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



Thrombospondin 4 (F-7): sc-390734. Western blot analysis of Thrombospondin 4 expression in C3H/10T1/2 whole cell lysate (**A**) and rat testis (**B**) and mouse testis (**C**) tissue extracts. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Thrombospondin 4 (F-7): sc-390734. Western blot analysis of Thrombospondin 4 expression in F9 (**A**) and Hep G2 (**B**) whole cell lysates and mouse testis tissue extract (**C**).

SELECT PRODUCT CITATIONS

1. Min, D., et al. 2013. Downregulation of miR-302c and miR-520c by $1,25(OH)_2D_3$ treatment enhances the susceptibility of tumour cells to natural killer cell-mediated cytotoxicity. Br. J. Cancer 109: 723-730.
2. Krawczyk, K.K., et al. 2016. Assessing the contribution of Thrombospondin 4 induction and ATF6α activation to endoplasmic reticulum expansion and phenotypic modulation in bladder outlet obstruction. Sci. Rep. 6: 32449.
3. Giordani, L., et al. 2019. High-dimensional single-cell cartography reveals novel skeletal muscle-resident cell populations. Mol. Cell 74: 609-621.
4. Laug, D., et al. 2019. Nuclear factor I-A regulates diverse reactive astrocyte responses after CNS injury. J. Clin. Invest. 129: 4408-4418.
5. Rahman, M.T., et al. 2020. Effects of Thrombospondin 4 on pro-inflammatory phenotype differentiation and apoptosis in macrophages. Cell Death Dis. 11: 53.
6. Camps, J., et al. 2020. Interstitial cell remodeling promotes aberrant adipogenesis in dystrophic muscles. Cell Rep. 31: 107597.
7. Kim, M.S., et al. 2020. Potential role of PDGFRβ-associated THBS4 in colorectal cancer development. Cancers 12: E2533.
8. Wu, X., et al. 2022. Synaptic hyperexcitability of cytomegalic pyramidal neurons contributes to epileptogenesis in tuberous sclerosis complex. Cell Rep. 40: 111085.

RESEARCH USE

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