

Thrombospondin 4 (G-10): sc-28293

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.

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 II: 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.

CHROMOSOMAL LOCATION

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

SOURCE

Thrombospondin 4 (G-10) is a mouse monoclonal antibody raised against amino acids 141-240 of Thrombospondin 4 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Thrombospondin 4 (G-10) 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), immunohistochemistry (including paraffin-embedded sections) (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.

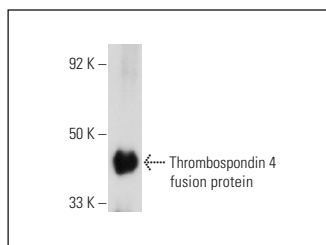
Molecular Weight of Thrombospondin 4: 135 kDa.

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

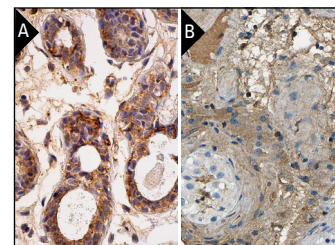
RECOMMENDED SUPPORT REAGENTS

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, 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Thrombospondin 4 (G-10): sc-28293. Western blot analysis of human recombinant Thrombospondin 4 fusion protein.



Thrombospondin 4 (G-10): sc-28293. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

1. McCart Reed, A.E., et al. 2013. Thrombospondin-4 expression is activated during the stromal response to invasive breast cancer. *Virchows Arch.* 463: 535-545.
2. Jo, C.H., et al. 2019. Characterization of tendon-specific markers in various human tissues, tenocytes and mesenchymal stem cells. *Tissue Eng. Regen. Med.* 16: 151-159.
3. Harada, J., et al. 2021. Pathological significance and prognostic roles of Thrombospondin-3, 4 and 5 in bladder cancer. *In Vivo* 35: 1693-1701.

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.