SANTA CRUZ BIOTECHNOLOGY, INC.

Thrombospondin 1 (C-8): sc-393504

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 II: partial cDNA sequence, chromosome location and expression of a second member of the thrombospondin gene family in humans. Genomics 12: 421-429.

CHROMOSOMAL LOCATION

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

SOURCE

Thrombospondin 1 (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 22-51 near the N-terminus of Thrombospondin 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Thrombospondin 1 (C-8) is available conjugated to agarose (sc-393504 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393504 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393504 PE), fluorescein (sc-393504 FITC), Alexa Fluor® 488 (sc-393504 AF488), Alexa Fluor® 546 (sc-393504 AF546), Alexa Fluor® 594 (sc-393504 AF594) or Alexa Fluor® 647 (sc-393504 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393504 AF680) or Alexa Fluor® 790 (sc-393504 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393504 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

Thrombospondin 1 (C-8) is recommended for detection of Thrombospondin 1 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).

Thrombospondin 1 (C-8) is also recommended for detection of Thrombospondin 1 in additional species, including equine, bovine and porcine.

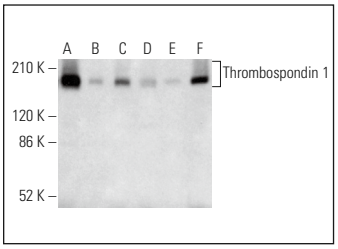
Suitable for use as control antibody for Thrombospondin 1 siRNA (h): sc-36665, Thrombospondin 1 siRNA (m): sc-36666, Thrombospondin 1 siRNA (r): sc-270413, Thrombospondin 1 shRNA Plasmid (h): sc-36665-SH, Thrombospondin 1 shRNA Plasmid (m): sc-36666-SH, Thrombospondin 1 shRNA Plasmid (r): sc-270413-SH, 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 Thrombospondin 1 various forms: 165-198 kDa.

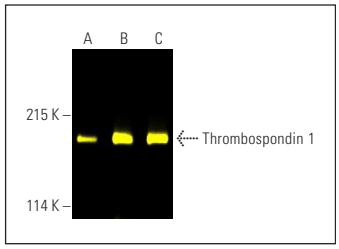
Molecular Weight of Thrombospondin 1 homotrimer: 420 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, 3T3-L1 cell lysate: sc-2243 or A549 cell lysate: sc-2413.

DATA



Thrombospondin 1 (C-8): sc-393504. Western blot analysis of Thrombospondin 1 expression in MCF7 (**A**), 3T3-L1 (**B**), A549 (**C**), HeLa (**D**), U-251-MG (**E**) and WI-38 (**F**) whole cell lysates.



Thrombospondin 1 (C-8) Alexa Fluor® 488: sc-393504 AF488. Direct fluorescent western blot analysis of Thrombospondin 1 expression in BJ (**A**), HUV-EC-C (**B**) and CCD-1064Sk (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Paul, A., et al. 2019. Transcriptional regulation of thrombospondins and its functional validation through CRISPR/Cas9 mediated gene editing in corpus luteum of water buffalo *(Bubalus bubalis).* Cell. Physiol. Biochem. 52: 532-552.
2. Thalwieser, Z., et al. 2024. PP2A affects angiogenesis via its interaction with a novel phosphorylation site of TSP1. Int. J. Mol. Sci. 25: 1844.

STORAGE

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