SANTA CRUZ BIOTECHNOLOGY, INC.

Thrombospondin 1 (SPM321): sc-65612

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.

CHROMOSOMAL LOCATION

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

SOURCE

Thrombospondin 1 (SPM321) is a mouse monoclonal antibody raised against reduced and alkylated purified TSP (fully denatured) from the supernatant of Thrombin-activated platelets 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 1 (SPM321) is recommended for detection of reduced and non-reduced Thrombospondin 1 of mouse, rat, human, ovine, equine, bovine, porcine and canine origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

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: CCD-1064Sk cell lysate: sc-2263, Saos-2 cell lysate: sc-2235 or Hs68 cell lysate: sc-2230.

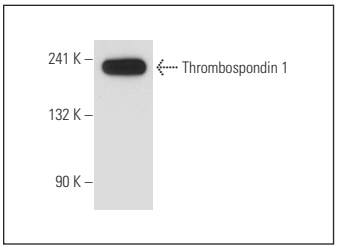
RESEARCH USE

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

STORAGE

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

DATA



Thrombospondin 1 (SPM321): sc-65612. Western blot analysis of Thrombospondin 1 expression in CCD-1064Sk whole cell lysate.

SELECT PRODUCT CITATIONS

1. Meng, H., et al. 2009. Localization of blood proteins Thrombospondin 1 and ADAMTS-13 to cerebral corpora amylacea. Neuropathology 29: 664-671.
2. Calamia, V., et al. 2011. Metabolic labeling of chondrocytes for the quantitative analysis of the interleukin-1-β-mediated modulation of their intracellular and extracellular proteomes. J. Proteome Res. 10: 3701-3711.
3. Calamia, V., et al. 2012. Secretome analysis of chondroitin sulfate-treated chondrocytes reveals anti-angiogenic, anti-inflammatory and anti-catabolic properties. Arthritis Res. Ther. 14: R202.
4. Shi, X., et al. 2013. Thrombospondin-1 is a putative target gene of Runx2 and Runx3. Int. J. Mol. Sci. 14: 14321-14332.
5. Zhang, B., et al. 2013. Identification of Enolase 1 and Thrombospondin-1 as serum biomarkers in HBV hepatic fibrosis by proteomics. Proteome Sci. 11: 30.
6. Sudha, T., et al. 2014. Suppression of pancreatic cancer by sulfated non-anticoagulant low molecular weight heparin. Cancer Lett. 350: 25-33.
7. Schadler, K.L., et al. 2014. Immunosurveillance by antiangiogenesis: tumor growth arrest by T cell-derived Thrombospondin-1. Cancer Res. 74: 2171-2181.
8. Blanco, S., et al. 2016. Stem cell function and stress response are controlled by protein synthesis. Nature 534: 335-340.
9. Kerr, B.A., et al. 2021. Platelet TSP-1 controls prostate cancer-induced osteoclast differentiation and bone marrow-derived cell mobilization through TGFβ-1. Am. J. Clin. Exp. Urol. 9: 18-31.

CONJUGATES

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