

Thrombospondin 1/2 (C-20): sc-7653

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 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. 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.
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.

CHROMOSOMAL LOCATION

Genetic locus: THBS1 (human) mapping to 15q14, THBS2 (human) mapping to 6q27; Thbs1 (mouse) mapping to 2 E5, Thbs2 (mouse) mapping to 17 A2.

SOURCE

Thrombospondin 1/2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Thrombospondin 2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7653 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Thrombospondin 1/2 (C-20) is recommended for detection of Thrombospondin 1 and Thrombospondin 2 of mouse, rat, human and *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 1/2 (C-20) is also recommended for detection of Thrombospondin 1 and Thrombospondin 2 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Thrombospondin 1/2: 190 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Oida, T., et al. 2003. CD4⁺CD25⁺ T cells that express latency-associated peptide on the surface suppress CD4⁺CD45RB high-induced colitis by a TGFβ-dependent mechanism. *J. Immunol.* 170: 2516-2522.
2. Azuma, A., et al. 2004. Interferon-β inhibits bleomycin-induced lung fibrosis by decreasing transforming growth factor-β and Thrombospondin. *Am. J. Respir. Cell Mol. Biol.* 32: 93-98.
3. Aghi, M., et al. 2007. Angiogenic response caused by oncolytic herpes simplex virus-induced reduced Thrombospondin expression can be prevented by specific viral mutations or by administering a Thrombospondin-derived peptide. *Cancer Res.* 67: 440-444.
4. Ashokumar, M., et al. 2011. An association study of thrombospondin 1 and 2 SNPs with coronary artery disease and myocardial infarction among South Indians. *Thromb. Res.* 128: e49-e53.

RESEARCH USE

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



Try **Thrombospondin 1/2 (G-1): sc-133061** or **Thrombospondin 1/2 (D-9): sc-74538**, our highly recommended monoclonal alternatives to Thrombospondin 1/2 (C-20).