

Thrombospondin 1/2 (D-9): sc-74538

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.
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: 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 (D-9) is a mouse monoclonal antibody raised against amino acids 401-700 of Thrombospondin 1/2 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 1/2 (D-9) is recommended for detection of Thrombospondin 1 and Thrombospondin 2 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).

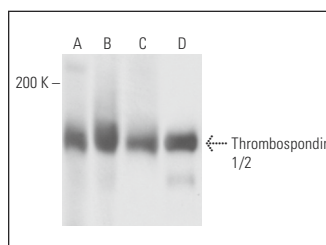
Molecular Weight of Thrombospondin 1/2: 190 kDa.

Positive Controls: Thrombospondin 2 (h): 293T Lysate: sc-112656, CCD-1064Sk cell lysate: sc-2263 or Saos-2 cell lysate: sc-2235.

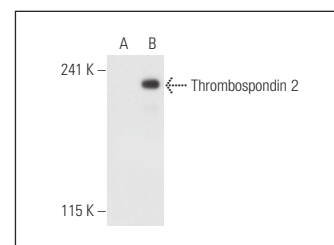
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Thrombospondin 1/2 (D-9): sc-74538. Western blot analysis of Thrombospondin 1/2 expression in Saos-2 (A), CCD-1064Sk (B), Hs68 (C) and BJ (D) whole cell lysates.



Thrombospondin 1/2 (D-9): sc-74538. Western blot analysis of Thrombospondin 2 expression in non-transfected: sc-117752 (A) and human Thrombospondin 2 transfected: sc-112656 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hsieh, J.L., et al. 2010. Intraarticular gene transfer of thrombospondin-1 suppresses the disease progression of experimental osteoarthritis. *J. Orthop. Res.* 28: 1300-1306.
2. Roy, A., et al. 2013. Antidicer RNAse activity of monocyte chemotactic protein-induced protein-1 is critical for inducing angiogenesis. *Am. J. Physiol., Cell Physiol.* 305: C1021-C1032.
3. Chen, K.H., et al. 2016. Intravenous administration of xenogenic adipose-derived mesenchymal stem cells (ADMSC) and ADMSC-derived exosomes markedly reduced brain infarct volume and preserved neurological function in rat after acute ischemic stroke. *Oncotarget* 7: 74537-74556.

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.



See **Thrombospondin 1 (A6.1): sc-59887** for additional antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.