

Thrombospondin 5 (F-7): sc-374660

BACKGROUND

Thrombospondin 5 (also designated THBS5, cartilage oligomeric matrix protein or COMP) is the fifth member of the Thrombospondin family of extracellular matrix proteins. The Thrombospondin family share overall homology, with significant homology in their carboxy-terminal globular domains. They all contain type 2 (epidermal growth factor-like) and type 3 (calmodulin-like) repeats in their central domains. The human COMP/THBS5 gene maps to chromosome 19p13.1. Thrombospondin 5 is expressed in all types of cartilage, tendon and vascular smooth muscle. Its localization in cartilage is developmentally regulated to the chondrocyte territorial and interterritorial matrix. Thrombospondin 5 also binds to Collagen Type I, II and IX in a zinc-dependent manner. Mutations in the COMP/THBS5 gene are associated with the human genetic disorders pseudoachondroplasia (PSACH) and some types of multiple epiphyseal dysplasia (MED). PSACH and MED are autosomal dominant chondrodysplasias, which cause mild to severe short-limb dwarfism and early-onset osteoarthritis.

REFERENCES

- Hedbom, E., et al. 1992. Cartilage matrix proteins. An acidic oligomeric protein (COMP) detected only in cartilage. *J. Biol. Chem.* 267: 6132-6136.
- Newton, G., et al. 1994. Characterization of human and mouse cartilage oligomeric matrix protein. *Genomics* 24: 435-439.
- Shen, Z., et al. 1995. Distribution and expression of cartilage oligomeric matrix protein and bone sialoprotein show marked changes during rat femoral head development. *Matrix Biol.* 14: 773-781.
- Briggs, M.D., et al. 1995. Pseudoachondroplasia and multiple epiphyseal dysplasia due to mutations in the cartilage oligomeric matrix protein gene. *Nat. Genet.* 10: 330-336.

CHROMOSOMAL LOCATION

Genetic locus: COMP (human) mapping to 19p13.11.

SOURCE

Thrombospondin 5 (F-7) is a mouse monoclonal antibody raised against amino acids 21-110 mapping near the N-terminus of Thrombospondin 5 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.

Thrombospondin 5 (F-7) is available conjugated to agarose (sc-374660 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374660 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374660 PE), fluorescein (sc-374660 FITC), Alexa Fluor[®] 488 (sc-374660 AF488), Alexa Fluor[®] 546 (sc-374660 AF546), Alexa Fluor[®] 594 (sc-374660 AF594) or Alexa Fluor[®] 647 (sc-374660 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374660 AF680) or Alexa Fluor[®] 790 (sc-374660 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Thrombospondin 5 (F-7) is recommended for detection of Thrombospondin 5 (also designated COMP) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Thrombospondin 5 siRNA (h): sc-43195, Thrombospondin 5 shRNA Plasmid (h): sc-43195-SH and Thrombospondin 5 shRNA (h) Lentiviral Particles: sc-43195-V.

Molecular Weight of glycosylated Thrombospondin 5: 105-120 kDa.

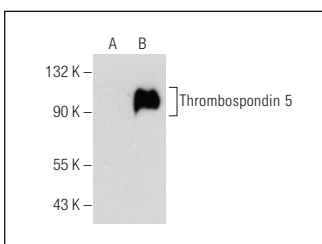
Positive Controls: Thrombospondin 5 (h2): 293T Lysate: sc-115080.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- 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 5 (F-7): sc-374660. Western blot analysis of Thrombospondin 5 expression in non-transfected: sc-117752 (A) and human Thrombospondin 5 transfected: sc-115080 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Giordani, L., et al. 2019. High-dimensional single-cell cartography reveals novel skeletal muscle-resident cell populations. *Mol. Cell* 74: 609-621.e6.
- Katzeff, J.S., et al. 2020. Altered serum protein levels in frontotemporal dementia and amyotrophic lateral sclerosis indicate calcium and immunity dysregulation. *Sci. Rep.* 10: 13741.

STORAGE

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

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