

Thrombospondin 5 (MA37C94): sc-59941

BACKGROUND

Thrombospondin 5 (also designated TSP 5, 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/TSP 5 gene maps to chromosome 19p13.11. 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/TSP 5 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 (MA37C94) is a rat monoclonal antibody raised against cartilage deprived Thrombospondin 5 of human origin.

PRODUCT

Each vial contains 1.0 ml culture supernatant containing IgG₁ with < 0.1% sodium azide.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

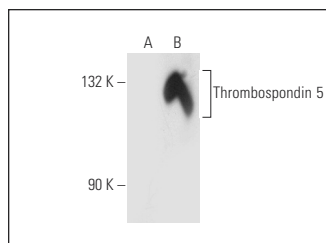
Thrombospondin 5 (MA37C94) is recommended for detection of Thrombospondin 5 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting 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 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.

DATA



Thrombospondin 5 (MA37C94): sc-59941. 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

- Inui, S., et al. 2011. Identification and characterization of cartilage oligomeric matrix protein as a novel pathogenic factor in keloids. *Am. J. Pathol.* 179: 1951-1960.

RESEARCH USE

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