SANTA CRUZ BIOTECHNOLOGY, INC.

Thrombospondin 5 (H-90): sc-32878

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Hedbom, E., et al. 1992. Cartilage matrix proteins. An acidic oligomeric protein (COMP) detected only in cartilage. J. Biol. Chem. 267: 6132-6136.
2. Newton, G., et al. 1994. Characterization of human and mouse cartilage oligomeric matrix protein. Genomics 24: 435-439.
3. 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.
4. 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.
5. Riessen, R., et al. 2001. Cartilage oligomeric matrix protein (Thrombospondin 5) is expressed by human vascular smooth muscle cells. Arterioscler. Thromb. Vasc. Biol. 21: 47-54.
6. Svensson, L., et al. 2002. Cartilage oligomeric matrix protein-deficient mice have normal skeletal development. Mol. Cell. Biol. 22: 4366-4371.

CHROMOSOMAL LOCATION

Genetic locus: COMP (human) mapping to 19p13.11; Comp (mouse) mapping to 8 B3.3.

SOURCE

Thrombospondin 5 (H-90) is a rabbit polyclonal antibody raised against amino acids 21-110 mapping near the N-terminus of Thrombospondin 5 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.

RESEARCH USE

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

APPLICATIONS

Thrombospondin 5 (H-90) is recommended for detection of Thrombospondin 5 (also designated COMP) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 siRNA (m): sc-43196, Thrombospondin 5 shRNA Plasmid (h): sc-43195-SH, Thrombospondin 5 shRNA Plasmid (m): sc-43196-SH, Thrombospondin 5 shRNA (h) Lentiviral Particles: sc-43195-V and Thrombospondin 5 shRNA (m) Lentiviral Particles: sc-43196-V.

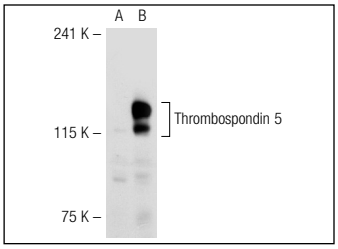
Molecular Weight of glycosylated Thrombospondin 5: 105-120 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Thrombospondin 5 (H-90): sc-32878. 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.

STORAGE

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