

# Thrombospondin 5 (N-15): sc-25162

## 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 19p13.11. 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/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.
- 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Thrombospondin 5 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Thrombospondin 5 (also designated COMP) 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-25162 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

Thrombospondin 5 (N-15) is recommended for detection of Thrombospondin 5 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).

Thrombospondin 5 (N-15) is also recommended for detection of Thrombospondin 5 in additional species, including equine, canine, bovine and porcine.

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: MIA PaCa-2 cell lysate: sc-2285.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **Thrombospondin 5 (F-7): sc-374660** or **Thrombospondin 5 (644A8D5): sc-33696**, our highly recommended monoclonal alternatives to Thrombospondin 5 (N-15).