

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

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.
- 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.
- Svensson, L., et al. 2002. Cartilage oligomeric matrix protein-deficient mice have normal skeletal development. *Mol. Cell. Biol.* 22: 4366-4371.
- Briggs, M.D., et al. 2002. Pseudoachondroplasia and multiple epiphyseal dysplasia: mutation review, molecular interactions and genotype to phenotype correlations. *Hum. Mutat.* 19: 465-478.

CHROMOSOMAL LOCATION

Genetic locus: COMP (human) mapping to 19p13.1.

PRODUCT

Thrombospondin 5 (h2): 293T Lysate represents a lysate of human Thrombospondin 5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Thrombospondin 5 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Thrombospondin 5 antibodies. Recommended use: 10-20 µl per lane.

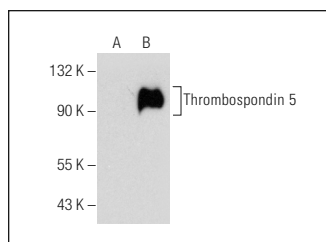
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Thrombospondin 5 (F-7): sc-374660 is recommended as a positive control antibody for Western Blot analysis of enhanced human Thrombospondin 5 expression in Thrombospondin 5 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

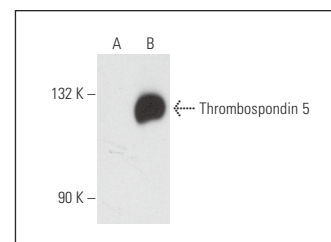
RECOMMENDED SUPPORT REAGENTS

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.

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.



Thrombospondin 5 (3H622): sc-73160. 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.

RESEARCH USE

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

PROTOCOLS

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