SANTA CRUZ BIOTECHNOLOGY, INC.

Thrombospondin 5 (E-20): sc-25163

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.

CHROMOSOMAL LOCATION

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

SOURCE

Thrombospondin 5 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of mature 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-25163 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

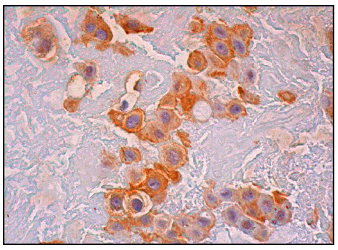
Thrombospondin 5 (E-20) is recommended for detection of precursor and mature Thrombospondin 5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (E-20) is also recommended for detection of precursor and mature 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.

DATA



Thrombospondin 5 (E-20): sc-25163. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane and cytoplasmic staining of decidual cells.

RESEARCH USE

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

PROTOCOLS

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