

# Tenomodulin (C-20): sc-49324

## BACKGROUND

Tenomodulin (TEM), also designated chondromodulin-I-like protein (CHM-1L), myodulin or tendin, acts as an angiogenesis inhibitor. It is a single-pass type II membrane protein that belongs to the chondromodulin family of proteins. The deduced 317 amino acid protein contains an N-terminal transmembrane domain and a putative antiangiogenic domain comprised of 8 cysteines. Human Tenomodulin shares 96% amino acid identity with mouse Tenomodulin, and it shares 65% identity in a 65 amino acid C-terminal stretch with chondromodulin I. Tenomodulin is expressed in skeletal muscle, eye, whole rib and dense connective tissues, such as epimysium and tendon.

## REFERENCES

1. Yamana, K., et al. 2001. Molecular cloning and characterization of CHM1L, a novel membrane molecule similar to chondromodulin-I. *Biochem. Biophys. Res. Commun.* 280: 1101-1106.
2. Shukunami, C., et al. 2001. Molecular cloning of Tenomodulin, a novel chondromodulin-I related gene. *Biochem. Biophys. Res. Commun.* 280: 1323-1327.
3. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300459. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Oshima, Y., et al. 2004. Antiangiogenic action of the C-terminal domain of Tenomodulin that shares homology with chondromodulin-I. *J. Cell Sci.* 117: 2731-2744.
5. Docheva, D., et al. 2005. Tenomodulin is necessary for tenocyte proliferation and tendon maturation. *Mol. Cell. Biol.* 25: 699-705.
6. Hiraki, Y. and Shukunami, C. 2005. Angiogenesis inhibitors localized in hypovascular mesenchymal tissues: chondromodulin-I and Tenomodulin. *Connect. Tissue Res.* 46: 3-11.

## CHROMOSOMAL LOCATION

Genetic locus: TNMD (human) mapping to Xq22.1; Tnmd (mouse) mapping to X E3.

## SOURCE

Tenomodulin (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal extracellular domain of Tenomodulin 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-49324 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

Tenomodulin (C-20) is recommended for detection of Tenomodulin 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), 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).

Tenomodulin (C-20) is also recommended for detection of Tenomodulin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Tenomodulin siRNA (h): sc-61665, Tenomodulin siRNA (m): sc-61666, Tenomodulin shRNA Plasmid (h): sc-61665-SH, Tenomodulin shRNA Plasmid (m): sc-61666-SH, Tenomodulin shRNA (h) Lentiviral Particles: sc-61665-V and Tenomodulin shRNA (m) Lentiviral Particles: sc-61666-V.

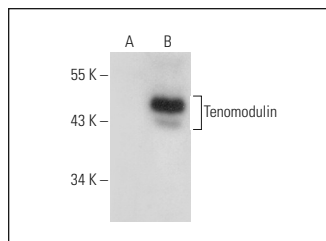
Molecular Weight of Tenomodulin: 37 kDa.

Positive Controls: Tenomodulin (m): 293T Lysate: sc-123980.

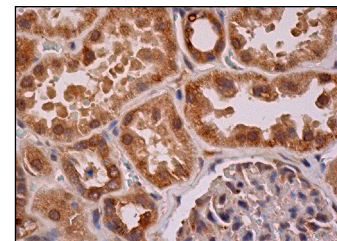
## RECOMMENDED SECONDARY REAGENTS

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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Tenomodulin (C-20): sc-49324. Western blot analysis of Tenomodulin expression in non-transfected: sc-117752 (A) and mouse Tenomodulin transfected: sc-123980 (B) 293T whole cell lysates.



Tenomodulin (C-20): sc-49324. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomerulus and tubules.

## RESEARCH USE

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