SANTA CRUZ BIOTECHNOLOGY, INC.

Tenomodulin (A-2): sc-518131

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 eight 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 ChM-1L, 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™. 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.

SOURCE

Tenomodulin (A-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 72-91 of Tenomodulin of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tenomodulin (A-2) is available conjugated to agarose (sc-518131 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518131 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518131 PE), fluorescein (sc-518131 FITC), Alexa Fluor® 488 (sc-518131 AF488), Alexa Fluor® 546 (sc-518131 AF546), Alexa Fluor® 594 (sc-518131 AF594) or Alexa Fluor® 647 (sc-518131 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518131 AF680) or Alexa Fluor® 790 (sc-518131 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Tenomodulin (A-2) is recommended for detection of Tenomodulin of human origin by Western Blotting (starting dilution 1:100, 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 Tenomodulin siRNA (h): sc-61665, Tenomodulin shRNA Plasmid (h): sc-61665-SH and Tenomodulin shRNA (h) Lentiviral Particles: sc-61665-V.

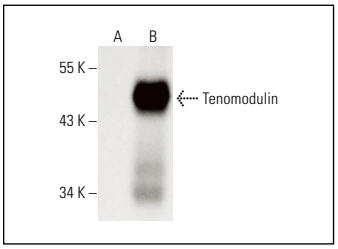
Molecular Weight of Tenomodulin: 37 kDa.

Positive Controls: human Tenomodulin transfected HEK293T whole cell lysate.

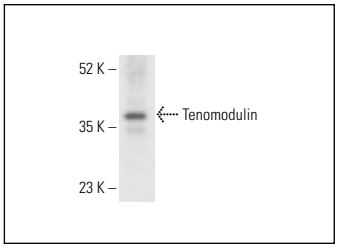
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Tenomodulin (A-2): sc-518131. Western blot analysis of Tenomodulin expression in non-transfected (**A**) and human Tenomodulin transfected (**B**) HEK293T whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Tenomodulin (A-2): sc-518131. Western blot analysis of Tenomodulin expression in SP2/0 whole cell lysate. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. He, Y., et al. 2024. Pharmacological modulation of gp130 signalling enhances Achilles tendon repair by regulating tenocyte migration and collagen synthesis via SHP2-mediated crosstalk of the ERK/AKT pathway. Biochem. Pharmacol. 226: 116370.

STORAGE

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

RESEARCH USE

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