

tropomodulin 3 (F-11): sc-365646

BACKGROUND

Originally isolated from human erythrocytes, the tropomodulin (TMOD) family of proteins cap the pointed end of Actin filaments. A component of the membrane skeleton, tropomodulin binds to the amino-terminus of Tropomyosin, which coats the surface of Actin and thus blocks the elongation and depolymerization of Actin filaments. Four tropomodulin isoforms, tropomodulin 1-4, have been characterized in humans. Tropomodulin expression is isoform-specific; tropomodulin 3 is expressed ubiquitously, whereas tropomodulin 2 and tropomodulin 4 are expressed in neuronal tissue and muscle, respectively. Ubiquitous expression of seven tropomodulin 3 transcripts, ranging in size between 1 and 9.5 kb, have been identified by Northern Blot analysis on human tissues. The human TMOD3 gene maps to chromosome 15q21.2, within the same region as the gene for amyotrophic lateral sclerosis 5 (ALS5) and encodes a 352 amino acid protein. Tmod3, the mouse homolog to human TMOD3, is present as early as day 7 in embryonic development and is expressed throughout development.

REFERENCES

- Sung, L.A., et al. 1996. Gene assignment, expression, and homology of human tropomodulin. *Genomics* 34: 92-96.
- Watakabe, A., et al. 1996. N-tropomodulin: a novel isoform of tropomodulin identified as the major binding protein to brain Tropomyosin. *J. Cell Sci.* 109: 2299-2310.

CHROMOSOMAL LOCATION

Genetic locus: TMOD3 (human) mapping to 15q21.2; Tmod3 (mouse) mapping to 9 D.

SOURCE

tropomodulin 3 (F-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 149-173 within an internal region of tropomodulin 3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

tropomodulin 3 (F-11) is available conjugated to agarose (sc-365646 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365646 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365646 PE), fluorescein (sc-365646 FITC), Alexa Fluor® 488 (sc-365646 AF488), Alexa Fluor® 546 (sc-365646 AF546), Alexa Fluor® 594 (sc-365646 AF594) or Alexa Fluor® 647 (sc-365646 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365646 AF680) or Alexa Fluor® 790 (sc-365646 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365646 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

tropomodulin 3 (F-11) is recommended for detection of tropomodulin 3 of mouse, rat and 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), 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).

tropomodulin 3 (F-11) is also recommended for detection of tropomodulin 3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for tropomodulin 3 siRNA (h): sc-36732, tropomodulin 3 siRNA (m): sc-36733, tropomodulin 3 shRNA Plasmid (h): sc-36732-SH, tropomodulin 3 shRNA Plasmid (m): sc-36733-SH, tropomodulin 3 shRNA (h) Lentiviral Particles: sc-36732-V and tropomodulin 3 shRNA (m) Lentiviral Particles: sc-36733-V.

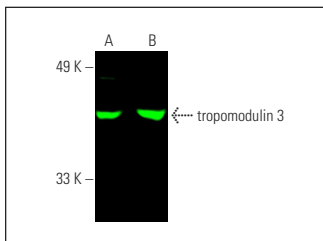
Molecular Weight of tropomodulin 3: 40 kDa.

Positive Controls: IB4 whole cell lysate: sc-364780, C2C12 whole cell lysate: sc-364188 or HeLa whole cell lysate: sc-2200.

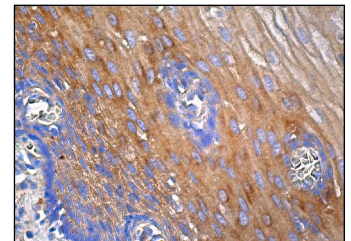
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



tropomodulin 3 (F-11): sc-365646. Near-Infrared western blot analysis of tropomodulin 3 expression in IB4 (A) and HeLa (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



tropomodulin 3 (F-11): sc-365646. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells.

STORAGE

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

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