

# TMEM12 (D-2): sc-398948

## BACKGROUND

USHA (Usher syndrome type-3) is thought to be involved in the maintenance of the inner ear and retina, specifically playing a role in excitatory ribbon synapse junctions between hair cells and cochlear ganglion cells, as well as in analogous synapses within the retina. Defects in the gene encoding USHA are the cause of Usher syndrome type 3 (USH3), a genetically heterogeneous condition characterized by postlingual progressive deafness and onset of retinitis pigmentosa in the second decade of life. TMEM12 (transmembrane protein 12), also known as USHA1 or CLRN3, is a 226 amino acid multi-pass membrane protein that belongs to the clarin family. Existing as two alternatively spliced isoforms TMEM12 may display similar functions as USHA.

## REFERENCES

1. Sankila, E.M., et al. 1995. Assignment of an Usher syndrome type III (USH3) gene to chromosome 3q. *Hum. Mol. Genet.* 4: 93-98.
2. Joensuu, T., et al. 1996. Refined mapping of the Usher syndrome type III locus on chromosome 3, exclusion of candidate genes, and identification of the putative mouse homologous region. *Genomics* 38: 255-263.
3. Adato, A., et al. 1999. Possible interaction between USH1B and USH3 gene products as implied by apparent digenic deafness inheritance. *Am. J. Hum. Genet.* 65: 261-265.
4. Joensuu, T., et al. 2000. A sequence-ready map of the Usher syndrome type III critical region on chromosome 3q. *Genomics* 63: 409-416.
5. Joensuu, T., et al. 2001. Mutations in a novel gene with transmembrane domains underlie Usher syndrome type 3. *Am. J. Hum. Genet.* 69: 673-684.

## CHROMOSOMAL LOCATION

Genetic locus: CLRN3 (human) mapping to 10q26.2; Clrn3 (mouse) mapping to 7 F3.

## SOURCE

TMEM12 (D-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 205-223 at the C-terminus of TMEM12 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TMEM12 (D-2) is available conjugated to agarose (sc-398948 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398948 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398948 PE), fluorescein (sc-398948 FITC), Alexa Fluor® 488 (sc-398948 AF488), Alexa Fluor® 546 (sc-398948 AF546), Alexa Fluor® 594 (sc-398948 AF594) or Alexa Fluor® 647 (sc-398948 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398948 AF680) or Alexa Fluor® 790 (sc-398948 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398948 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

TMEM12 (D-2) is recommended for detection of TMEM12 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TMEM12 siRNA (h): sc-90745, TMEM12 siRNA (m): sc-154355, TMEM12 shRNA Plasmid (h): sc-90745-SH, TMEM12 shRNA Plasmid (m): sc-154355-SH, TMEM12 shRNA (h) Lentiviral Particles: sc-90745-V and TMEM12 shRNA (m) Lentiviral Particles: sc-154355-V.

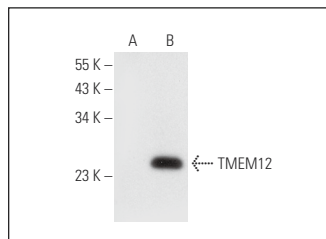
Molecular Weight of TMEM12 isoforms: 25/18 kDa.

Positive Controls: TMEM12 (m): 293T Lysate: sc-127669.

## 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



TMEM12 (D-2): sc-398948. Western blot analysis of TMEM12 expression in non-transfected: sc-117752 (A) and mouse TMEM12 transfected: sc-127669 (B) 293T whole cell lysates.

## 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.

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