

# TMEM12 (C-15): sc-244584

## BACKGROUND

USHSA (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 USH3A 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 USH3AL1 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 USHSA.

## REFERENCES

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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.
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6. Fields, R.R., et al. 2002. Usher syndrome type III: revised genomic structure of the USH3 gene and identification of novel mutations. *Am. J. Hum. Genet.* 71: 607-617.
7. Adato, A., et al. 2002. USH3A transcripts encode clarin-1, a four-transmembrane-domain protein with a possible role in sensory synapses. *Eur. J. Hum. Genet.* 10: 339-350.
8. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 606397. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

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

## SOURCE

TMEM12 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TMEM12 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-244584 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TMEM12 (C-15) is recommended for detection of TMEM12 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with USH3A.

TMEM12 (C-15) is also recommended for detection of TMEM12 in additional species, including equine, canine, bovine and porcine.

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.

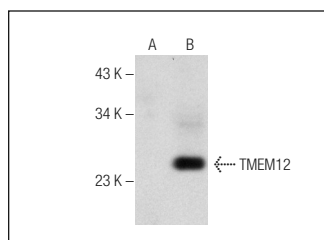
Molecular Weight of TMEM12 isoforms: 25/18 kDa.

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

## RECOMMENDED 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ 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™ Mounting Medium: sc-24941.

## DATA



TMEM12 (C-15): sc-244584. 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.