SANTA CRUZ BIOTECHNOLOGY, INC.

α-tectorin (C-20): sc-18035

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

α-tectorin (also designated TECTA) is an important non-collagenous component of the tectorial membrane which is an extracellular matrix of the inner ear. The tectorial membrane covers the cochleas neuroepithelium and contacts the stereocilia bundles of specialized sensory hair cells. Sound gets transduced into electrical signals by the movement of these hair cells relative to the tectorial membrane as the stereocilia deflect and cause fluctuations in hair-cell membrane potential. The α-tectorin protein can form homomeric or heteromeric filaments after self-association or association with β-tectorin, respectively. Mutations in the α-tectorin gene can cause autosomal dominant non-syndromic sensorineural deafness. The localization of these mutations in different modules of the protein may cause different clinical features.

REFERENCES

1. Iimura, O., et al. 1976. Studies on experimental coronary insufficiency. II. Effects of β-adrenergic blocking agent (propranolol) on metabolic response to adrenaline and noradrenaline in dogs with coronary constriction. Recent Adv. Stud. Cardiac Struct. Metab. 12: 543-547.
2. Legan, P.K., et al. 2000. A targeted deletion in α-tectorin reveals that the tectorial membrane is required for the gain and timing of cochlear feedback. Neuron 28: 273-285.
3. Maeda, Y., et al. 2001. Quantification of TECTA and DFNA5 expression in the developing mouse cochlea. Neuroreport 12: 3223-3226.
4. Iwasaki, S., et al. 2002. Association of clinical features with mutation of TECTA in a family with autosomal dominant hearing loss. Arch. Otolaryngol. Head Neck Surg. 128: 913-917
5. Pfister, M., et al. 2004. A genotype-phenotype correlation with gender-effect for hearing impairment caused by TECTA mutations. Cell. Physiol. Biochem. 14: 369-376.
6. Legan, P.K., et al. 2005. A deafness mutation isolates a second role for the tectorial membrane in hearing. Nat. Neurosci. 8:1035-1042.

CHROMOSOMAL LOCATION

Genetic locus: TECTA (human) mapping to 11q23.3; Tecta (mouse) mapping to 9 A5.1.

SOURCE

α-tectorin (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of α-tectorin 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-18035 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

α-tectorin (C-20) is recommended for detection of α-tectorin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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

Suitable for use as control antibody for α-tectorin siRNA (h): sc-45730, α-tectorin siRNA (m): sc-45731, α-tectorin shRNA Plasmid (h): sc-45730-SH, α-tectorin shRNA Plasmid (m): sc-45731-SH, α-tectorin shRNA (h) Lentiviral Particles: sc-45730-V and α-tectorin shRNA (m) Lentiviral Particles: sc-45731-V.

Molecular Weight of α-tectorin: 239 kDa.

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) 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.

SELECT PRODUCT CITATIONS

1. Winter, H., et al. 2009. Deafness in TRβ mutants is caused by malformation of the tectorial membrane. J. Neurosci. 29: 2581-2587.
2. Goel, M., et al. 2011. Cochlin induced TREK-1 co-expression and annexin A2 secretion: role in trabecular meshwork cell elongation and motility. PLoS ONE 6: e23070.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.