SANTA CRUZ BIOTECHNOLOGY, INC.

α-tectorin (2A5): sc-517128

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.

SOURCE

α-tectorin (2A5) is a mouse monoclonal antibody raised against amino acids 1981-2080 representing partial length α-tectorin of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 (2A5) is recommended for detection of α-tectorin of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

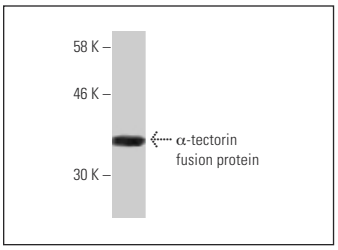
Suitable for use as control antibody for α-tectorin siRNA (h): sc-45730, α-tectorin shRNA Plasmid (h): sc-45730-SH and α-tectorin shRNA (h) Lentiviral Particles: sc-45730-V.

Molecular Weight of α-tectorin: 239 kDa.

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, 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).

DATA



α-tectorin (2A5): sc-517128. Western blot analysis of human recombinant α-tectorin fusion protein.

RESEARCH USE

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

PROTOCOLS

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