

Stereocilin (N-14): sc-165607

BACKGROUND

Stereocilin (STRC) is a 1,775 amino acid cell surface protein that belongs to the Stereocilin family. The STRC gene maps to human chromosome 15q15.3 and encodes a protein that is associated with the hair bundle of the sensory hair cells in the inner ear. The hair bundle is composed of stiff microvilli called stereocilia and is involved with mechanoreception of sound waves. Defects in Stereocilin are the cause of deafness autosomal recessive type 16 (DFNB16), which is a form of sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain or the area of the brain that receives sound information. Defects in Stereocilin can also cause deafness-infertility syndrome (DIS), which is characterized by deafness and infertility, and is caused by large contiguous gene deletions at 15q15.3 that remove both STRC and CatSper2 genes.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 603720. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Verpy, E., et al. 2001. Mutations in a new gene encoding a protein of the hair bundle cause non-syndromic deafness at the DFNB16 locus. *Nat. Genet.* 29: 345-349.
3. Zhang, Y., et al. 2007. Sensorineural deafness and male infertility: a contiguous gene deletion syndrome. *J. Med. Genet.* 44: 233-240.
4. Verpy, E., et al. 2008. Stereocilin-deficient mice reveal the origin of cochlear waveform distortions. *Nature* 456: 255-258.

CHROMOSOMAL LOCATION

Genetic locus: STRC (human) mapping to 15q15.3; Strc (mouse) mapping to 2 E5.

SOURCE

Stereocilin (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Stereocilin 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-165607 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.

PROTOCOLS

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

APPLICATIONS

Stereocilin (N-14) is recommended for detection of Stereocilin 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).

Suitable for use as control antibody for Stereocilin siRNA (h): sc-90251, Stereocilin siRNA (m): sc-153892, Stereocilin shRNA Plasmid (h): sc-90251-SH, Stereocilin shRNA Plasmid (m): sc-153892-SH, Stereocilin shRNA (h) Lentiviral Particles: sc-90251-V and Stereocilin shRNA (m) Lentiviral Particles: sc-153892-V.

Molecular Weight of Stereocilin: 193 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.

RESEARCH USE

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