SANTA CRUZ BIOTECHNOLOGY, INC.

Otoferlin (K-18): sc-50161

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The Power to Question

BACKGROUND

Otoferlin is a single-pass type II membrane protein composed of 1,230 amino acid residues. Otoferlin exists in four isoforms; isoform 1 is the full-length Otoferlin protein, whereas isoforms 2-4 are shorter versions of the protein. Expression of isoforms 1 and 3 is demonstrated in adult brain, while isoform 2 is expressed in the fetus, adult brain, heart, placenta, skeletal muscle and kidney tissues. Otoferlin has three C2 domains and a single carboxy-terminal transmembrane domain. The Otoferlin gene, OTOF, and its surrounding genes map to 2p23.3, and the 5' region of OTOF is centromeric. Mutations in the OTOF gene are implicated in deafness. Otoferlin is homologous to the *C. elegans* spermatogenesis factor FER-1 and to human dysferlin, implicating the involvement of Otoferlin in the Ca^{2+}-triggered synaptic vesicle-plasma membrane fusion.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: OTOF (human) mapping to 2p23.3; Otof (mouse) mapping to 5 B1.

SOURCE

Otoferlin (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Otoferlin of human origin.

RESEARCH USE

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

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-50161 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Otoferlin (K-18) is recommended for detection of Otoferlin 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).

Otoferlin (K-18) is also recommended for detection of Otoferlin in additional species, including avian.

Suitable for use as control antibody for Otoferlin siRNA (h): sc-61269, Otoferlin siRNA (m): sc-61270, Otoferlin shRNA Plasmid (h): sc-61269-SH, Otoferlin shRNA Plasmid (m): sc-61270-SH, Otoferlin shRNA (h) Lentiviral Particles: sc-61269-V and Otoferlin shRNA (m) Lentiviral Particles: sc-61270-V.

Molecular Weight of Otoferlin: 140.5 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or DU 145 cell lysate: sc-2268.

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.

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.