



otoancorin siRNA (h): sc-93482

BACKGROUND

Otoancorin, also known as OTOA, CT108 or DFNB22, is a 1,153 amino acid protein belonging to the stereocilin family. Expressed in the inner ear and restricted to the interface between the apical surface of sensory epithelia, otoancorin is suggested to act as an adhesion molecule. Otoancorin ensures the attachment of the inner ear acellular gels to the apical surface of the underlying nonsensory cells. Mutations in the gene encoding otoancorin leads to deafness autosomal recessive type 22 (DFNB22), 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. Existing as three alternatively spliced isoforms, otoancorin is encoded by a gene located on human chromosome 16p12.2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: OTOA (human) mapping to 16p12.2.

PROTOCOLS

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

PRODUCT

otoancorin siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see otoancorin shRNA Plasmid (h): sc-93482-SH and otoancorin shRNA (h) Lentiviral Particles: sc-93482-V as alternate gene silencing products.

For independent verification of otoancorin (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-93482A, sc-93482B and sc-93482C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

otoancorin siRNA (h) is recommended for the inhibition of otoancorin expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor otoancorin gene expression knockdown using RT-PCR Primer: otoancorin (h)-PR: sc-93482-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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