SANTA CRUZ BIOTECHNOLOGY, INC.

GRXCR1 siRNA (m): sc-145789

BACKGROUND

GRXCR1 (glutaredoxin domain-containing cysteine-rich protein 1), also known as DFNB25, is a 290 amino acid protein that belongs to the GRXCR1 family and contains one glutaredoxin domain, which may function in the reversible S-glutathionylation of proteins. Localizing to cell projections, GRXCR1 is highly expressed in fetal cochlea with moderate levels found in testis and low levels expressed in adult lung, brain and duodenum. GRXCR1 may play a role in actin filament architecture in developing stereocilia. The gene encoding GRXCR1 maps to human chromosome 4p13; defects to this gene result in deafness autosomal recessive type 25 (DFNB25), which is characterized by progressive hearing loss, impaired speech development and vestibular dysfunction.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Grxcr1 (mouse) mapping to 5 C3.1.

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.

PRODUCT

GRXCR1 siRNA (m) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GRXCR1 shRNA Plasmid (m): sc-145789-SH and GRXCR1 shRNA (m) Lentiviral Particles: sc-145789-V as alternate gene silencing products.

For independent verification of GRXCR1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-145789A, sc-145789B and sc-145789C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

GRXCR1 siRNA (m) is recommended for the inhibition of GRXCR1 expression in mouse 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 µM in 66 µl. 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 GRXCR1 gene expression knockdown using RT-PCR Primer: GRXCR1 (m)-PR: sc-145789-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.