

GFR α -4 siRNA (h): sc-60683

BACKGROUND

Glial cell line-derived neurotrophic factor (GDNF) and the related neurotrophic factor neurturin (NTN) are potent survival factors for central and peripheral neurons. Receptors for these factors include GFR α -1 (previously designated GDNFR- α), GFR α -2 (also designated RETL2), GFR α -3 and GFR α -4 (also known as persephin receptor). The receptors do not contain transmembrane domains and are attached to the cell membrane by glycosylphosphoinositol linkage. Binding of GDNF or NTN to one of these receptors leads to the activation of the tyrosine kinase Ret. GFR α -4 mediates the activation and GDNF-induced autophosphorylation of the Ret receptor. It is mainly expressed in the adult thyroid gland, but lower levels may also be detected in fetal adrenal and thyroid glands.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GFRA4 (human) mapping to 20p13.

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

GFR α -4 siRNA (h) is a pool of 2 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 GFR α -4 shRNA Plasmid (h): sc-60683-SH and GFR α -4 shRNA (h) Lentiviral Particles: sc-60683-V as alternate gene silencing products.

For independent verification of GFR α -4 (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-60683A and sc-60683B.

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

GFR α -4 siRNA (h) is recommended for the inhibition of GFR α -4 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 GFR α -4 gene expression knockdown using RT-PCR Primer: GFR α -4 (h)-PR: sc-60683-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.