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SLC4A8 siRNA (m): sc-153570

BACKGROUND

SLC4A8 (solute carrier family 4, sodium bicarbonate cotransporter, member 8), also known as NBC3, kNBC3 or NDCBE (Na⁺-driven chloride bicarbonate exchanger), is a member of the anion exchanger family and is predominantly expressed in brain and spinal column with moderate expression in thyroid, kidney and trachea. In the brain, SLC4A8 is found at high levels in the pyramidal cells of the hippocampus and the Purkinje cells of the cerebellum. Localizing to the membrane, SLC4A8 is an N-glycosylated, multi-pass membrane protein that plays an important role in intracellular pH regulation in neurons. More specifically, SLC4A8 functions as an electroneutral transporter and mediates the transport of bicarbonate and sodium ions across the membrane from the blood to the cell in exchange for cellular chloride. SLC4A8 is most closely related to NCBE and SLC4A7. Due to alternative splicing events, seven isoforms exist for SLC4A8.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Slc4a8 (mouse) mapping to 15 F1.

PRODUCT

SLC4A8 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 SLC4A8 shRNA Plasmid (m): sc-153570-SH and SLC4A8 shRNA (m) Lentiviral Particles: sc-153570-V as alternate gene silencing products.

For independent verification of SLC4A8 (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-153570A, sc-153570B and sc-153570C.

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

SLC4A8 siRNA (m) is recommended for the inhibition of SLC4A8 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 SLC4A8 gene expression knockdown using RT-PCR Primer: SLC4A8 (m)-PR: sc-153570-PR (20 μl). 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.