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SANTA CRUZ BIOTECHNOLOGY, INC.

NCKX4 siRNA (m): sc-149855

BACKGROUND

Plasma membrane sodium/calcium exchangers are crucial for the maintenance of intracellular calcium homeostasis and the modulation of electrical conduction. Potassium-dependent sodium/calcium exchangers, such as NCKX4 ($Na^+/K^+/Ca^{2+}$-exchange protein 4), are presumed to transport an intracellular calcium and a potassium ion in exchange for four extracellular sodium ions. NCKX4, also known as SLC24A4, SHEP6 or SLC24A2, is a 605 amino acid multi-pass membrane protein belonging to the sodium/potassium/calcium exchanger family. Expressed abundantly in brain, aorta, lung and thymus with lower levels in stomach and intestine, NCKX4 is associated with skin, hair and eye pigmentation. NCKX4 exists as four alternatively spliced isoforms and is encoded by a gene located on human chromosome 14q32.12.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Slc24a4 (mouse) mapping to 12 E.

RESEARCH USE

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

PRODUCT

NCKX4 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 NCKX4 shRNA Plasmid (m): sc-149855-SH and NCKX4 shRNA (m) Lentiviral Particles: sc-149855-V as alternate gene silencing products.

For independent verification of NCKX4 (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-149855A, sc-149855B and sc-149855C.

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

NCKX4 siRNA (m) is recommended for the inhibition of NCKX4 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 NCKX4 gene expression knockdown using RT-PCR Primer: NCKX4 (m)-PR: sc-149855-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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