SANTA CRUZ BIOTECHNOLOGY, INC.

NCKX6 siRNA (h): sc-95984

BACKGROUND

NCKX6 ($Na^+/K^+/Ca^{2+}$-exchange protein 6), also designated SLC24A6 (solute carrier family 24 member 6), belongs to a family of potassium-dependent sodium/calcium exchangers, all of which contain two large hydrophilic loops and two sets of multiple transmembrane-spanning segments. Potassium-dependent sodium/calcium exchangers maintain cellular calcium homeostasis via the countertransport of four sodium ions for one calcium ion and a potassium ion. Belonging to the SLC24A subfamily and consisting of 584 amino acids, NCKX6 is unlike other potassium-dependent sodium/calcium exchangers in that it functions independently of potassium and transports calcium in exchange for either lithium or sodium. NCKX6 is a multi-pass membrane protein that is strongly inhibited by zinc, exists as two alternatively spliced isoforms and is encoded by a gene mapping to human chromosome 12q24.13.

REFERENCES

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3. Palty, R., et al. 2004. Lithium-calcium exchange is mediated by a distinct potassium-independent sodium-calcium exchanger. J. Biol. Chem. 279: 25234-25240.
4. Schnetkamp, P.P. 2004. The SLC24 Na^+/Ca^{2+}-K^+ exchanger family: vision and beyond. Pflugers Arch. 447: 683-688.
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CHROMOSOMAL LOCATION

Genetic locus: SLC24A6 (human) mapping to 12q24.13.

PRODUCT

NCKX6 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NCKX6 shRNA Plasmid (h): sc-95984-SH and NCKX6 shRNA (h) Lentiviral Particles: sc-95984-V as alternate gene silencing products.

For independent verification of NCKX6 (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-95984A, sc-95984B and sc-95984C.

RESEARCH USE

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

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

NCKX6 siRNA (h) is recommended for the inhibition of NCKX6 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 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 NCKX6 gene expression knockdown using RT-PCR Primer: NCKX6 (h)-PR: sc-95984-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.