

Slo3 siRNA (m): sc-153603

BACKGROUND

Voltage-gated K⁺ channels in the plasma membrane are important regulators of electrical signaling, controlling the repolarization and the frequency of action potentials in neurons, muscles, and other excitable cells. Slo3 (Slowpoke homolog 3), also known as Potassium channel subfamily U member 1 and Calcium-activated potassium channel subunit α -3, is a 1,149 amino acid multi-pass membrane protein that acts as a potassium channel activated by intracellular pH and membrane voltage. Specifically expressed in testis, it is suggested that Slo3 may be involved in essential steps of fertilization where changes in both the intracellular pH and membrane potential are known to occur, such as sperm capacitation and/or the acrosome reaction. Knockout of the Slo3 gene leads to several defects in sperm such as a bent "hairpin" shape, impaired motility and failure to undergo the acrosome reaction.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Kcnu1 (mouse) mapping to 8 A2.

PROTOCOLS

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

PRODUCT

Slo3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Slo3 shRNA Plasmid (m): sc-153603-SH and Slo3 shRNA (m) Lentiviral Particles: sc-153603-V as alternate gene silencing products.

For independent verification of Slo3 (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-153603A, sc-153603B and sc-153603C.

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

Slo3 siRNA (m) is recommended for the inhibition of Slo3 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 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 Slo3 gene expression knockdown using RT-PCR Primer: Slo3 (m)-PR: sc-153603-PR (20 μ l). 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.