SANTA CRUZ BIOTECHNOLOGY, INC.

KCNN2 siRNA (m): sc-146371

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Immediately following action potentials in vertebrate neurons, calcium-activated potassium channels mediate the afterhyperpolarization (AHP) that dictates the firing pattern of the neuron. KCCN2, also known as Small conductance calcium-activated potassium channel protein 2 (SK2), is a voltage-independent potassium channel that is activated by calcium prior to the AHP. By contributing to the slow component of synaptic AHP, KCCN2 is believed to regulate neuron excitability. As a widely expressed integral membrane protein, KCCN2 forms a heterooligomer composed of three other channel subunits, where each subunit is bound to a calcium-binding calmodulin subunit. KCCN2 activity can be blocked by the neurotoxins tubocurarine, apamin and scyllatoxin.

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CHROMOSOMAL LOCATION

Genetic locus: Kcnn2 (mouse) mapping to 18 C.

PRODUCT

KCNN2 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 KCNN2 shRNA Plasmid (m): sc-146371-SH and KCNN2 shRNA (m) Lentiviral Particles: sc-146371-V as alternate gene silencing products.

For independent verification of KCNN2 (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-146371A, sc-146371B and sc-146371C.

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

KCNN2 siRNA (m) is recommended for the inhibition of KCNN2 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 KCNN2 gene expression knockdown using RT-PCR Primer: KCNN2 (m)-PR: sc-146371-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.

PROTOCOLS

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