SANTA CRUZ BIOTECHNOLOGY, INC.

KCNV2 siRNA (h): sc-92827

BACKGROUND

Voltage-gated potassium channels play an essential role in controlling cellular excitability in the nervous system. They regulate a variety of properties including membrane potential as well as the frequency and structure of action potentials. KCNV2 (potassium channel, subfamily V, member 2), also known as KV11.1, is a 562 amino acid multi-pass membrane protein that belongs to the potassium channel family, the V subfamily and the Kv8.2/KCNV2 subsubfamily. KCNV2 forms a heteromultimer with KV2.1, KV3.1 and KIR2.1. Considered a potassium channel subunit, KCNV2 modulates channel activity by shifting the threshold and the half-maximal activation to more negative values. KCNV2 is encoded by a gene located on human chromosome 9p24.2 and mouse chromosome 19 C1. Human chromosome 9 consists of about 145 million bases and encodes nearly 900 genes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: KCNV2 (human) mapping to 9p24.2.

PROTOCOLS

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

PRODUCT

KCNV2 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 KCNV2 shRNA Plasmid (h): sc-92827-SH and KCNV2 shRNA (h) Lentiviral Particles: sc-92827-V as alternate gene silencing products.

For independent verification of KCNV2 (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-92827A, sc-92827B and sc-92827C.

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

KCNV2 siRNA (h) is recommended for the inhibition of KCNV2 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 KCNV2 gene expression knockdown using RT-PCR Primer: KCNV2 (h)-PR: sc-92827-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.