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KCNE4 shRNA (h) Lentiviral Particles: sc-45535-V

BACKGROUND

The KCNE genes encode small, single transmembrane domain peptides that associate with pore-forming potassium channel subunits to form mixed complexes with unique characteristics. KCNE4 is a membrane protein belonging to a family of single transmembrane domain proteins known to have dramatic effect on the gating of certain potassium channels. KCNE4 is expressed strongly in heart, skeletal muscle, and kidney. Electrophysiological studies show that human KCNE4 modulates the activation of the KCNQ1 channel.

REFERENCES

1. Grunnet, M., Jespersen, T., Rasmussen, H.B., Ljungstrom, T., Jorgensen, N.K., Olesen, S.P. and Klaerke, D.A. 2002. KCNE4 is an inhibitory subunit to the KCNQ1 channel. *J. Physiol.* 542: 119-130.
2. Grunnet, M., Rasmussen, H.B., Hay-Schmidt, A., Rosenstjerne, M., Klaerke, D.A., Olesen, S.P. and Jespersen, T. 2003. KCNE4 is an inhibitory subunit to Kv1.1 and Kv1.3 potassium channels. *Biophys. J.* 85: 1525-1537.
3. Teng, S., Ma, L., Zhen, Y., Lin, C., Bähring, R., Vardanyan, V., Pongs, O. and Hui, R. 2003. Novel gene hKCNE4 slows the activation of the KCNQ1 channel. *Biochem. Biophys. Res. Commun.* 303: 808-813.
4. Lundquist, A.L., Manderfield, L.J., Vanoye, C.G., Rogers, C.S., Donahue, B.S., Chang, P.A., Drinkwater, D.C., Murray, K.T. and George, A.L., Jr. 2005. Expression of multiple KCNE genes in human heart may enable variable modulation of I(Ks). *J. Mol. Cell. Cardiol.* 38: 277-287.

CHROMOSOMAL LOCATION

Genetic locus: KCNE4 (human) mapping to 2q36.1.

PRODUCT

KCNE4 shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 μ l frozen stock containing 1.0×10^6 infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see KCNE4 siRNA (h): sc-45535 and KCNE4 shRNA Plasmid (h): sc-45535-SH as alternate gene silencing products.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

PROTOCOLS

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

APPLICATIONS

KCNE4 shRNA (h) Lentiviral Particles is recommended for the inhibition of KCNE4 expression in human cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 μ l frozen viral stock containing 1.0×10^6 infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

GENE EXPRESSION MONITORING

KCNE4 (N-14): sc-34914 is recommended as a control antibody for monitoring of KCNE4 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor KCNE4 gene expression knockdown using RT-PCR Primer: KCNE4 (h)-PR: sc-45535-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.