

KCNF1 shRNA (m) Lentiviral Particles: sc-146358-V

BACKGROUND

KCNF1 (potassium voltage-gated channel subfamily F member 1) is a multi-pass membrane-bound protein that acts as an ion channel and is generally expressed as a heterotetramer of potassium channeling proteins. Formerly known as kh1, KCNF1 is usually found as a heteromer with three other potassium channel proteins, KCNG3, KV6.3 and KCNV2. As a potassium channel protein, KCNF1 plays a role in regulating apoptosis and proliferation of pulmonary artery smooth muscle (PASM) cells. Bone morphogenetic proteins (BMPs) restrict proliferation and can induce apoptosis in normal human PASM cells and will upregulate expression of KCNF1 in PASM cells *in vitro*. KCNF1 is expressed in heart, brain, liver, skeletal muscle, kidney and pancreas.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Kcnf1 (mouse) mapping to 12 A1.1.

PRODUCT

KCNF1 shRNA (m) Lentiviral Particles are concentrated, transduction-ready viral particles containing a target-specific construct that encodes a 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 KCNF1 siRNA (m): sc-146358 and KCNF1 shRNA Plasmid (m): sc-146358-SH as alternate gene silencing products.

APPLICATIONS

KCNF1 shRNA (m) Lentiviral Particles is recommended for the inhibition of KCNF1 expression in mouse 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor KCNF1 gene expression knockdown using RT-PCR Primer: KCNF1 (m)-PR: sc-146358-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.

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 for detailed protocols and support products.