SANTA CRUZ BIOTECHNOLOGY, INC.

SLC17A9 siRNA (h): sc-72740

BACKGROUND

SLC17A9 (solute carrier family 17 member 9) is a 436 amino acid multi-pass membrane protein that belongs to the major facilitator superfamily and the Sodium/anion cotransporter family. The SLC17A9 protein has 12 transmembrane domains and is predominantly expressed in adrenal gland, brain and thyroid. Involved in vesicular storage and exocytosis of ATP, SLC17A9 may accumulate ATP and other nucleotides in secretory vesicles such as adrenal chromaffin granules and synaptic vesicles. The SLC17A9 protein also acts as a VNUT, which is involved in ATP storage and release. The SLC17A9 gene contains 14 exons and spans about 13 kb. Existing as three alternatively spliced isoforms, the SLC17A9 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito and *C. elegans,* and maps to human chromosome 20q13.33. Representing about 2% of human DNA, chromosome 20 consists of approximately 63 million bases and 600 genes.

REFERENCES

1. Deloukas, P., et al. 2001. The DNA sequence and comparative analysis of human chromosome 20. Nature 414: 865-871.
2. Ville, D., et al. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. Epilepsia 47: 543-549.
3. Joó, J.G., et al. 2006. Trisomy 20 mosaicism and nonmosaic trisomy 20: a report of 2 cases. J. Reprod. Med. 51: 209-212.
4. Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. Asian J. Androl. 9: 540-544.
5. Sawada, K., et al. 2008. Identification of a vesicular nucleotide transporter. Proc. Natl. Acad. Sci. USA 105: 5683-5686.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612107. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Tokunaga, A., et al. 2010. Involvement of SLC17A9-dependent vesicular exocytosis in the mechanism of ATP release during T cell activation. J. Biol. Chem. 285: 17406-17416.

CHROMOSOMAL LOCATION

Genetic locus: SLC17A9 (human) mapping to 20q13.33.

PRODUCT

SLC17A9 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 SLC17A9 shRNA Plasmid (h): sc-72740-SH and SLC17A9 shRNA (h) Lentiviral Particles: sc-72740-V as alternate gene silencing products.

For independent verification of SLC17A9 (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-72740A, sc-72740B and sc-72740C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

SLC17A9 siRNA (h) is recommended for the inhibition of SLC17A9 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 SLC17A9 gene expression knockdown using RT-PCR Primer: SLC17A9 (h)-PR: sc-72740-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Sathe, M.N., et al. 2011. Regulation of purinergic signaling in biliary epithelial cells by exocytosis of SLC17A9-dependent ATP-enriched vesicles. J. Biol. Chem. 286: 25363-25376.
2. Martins, I., et al. 2014. Molecular mechanisms of ATP secretion during immunogenic cell death. Cell Death Differ. 21: 79-91.

PROTOCOLS

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