

SLC12A8 siRNA (m): sc-153489

BACKGROUND

SLC12A8 (solute carrier family 12 member 8) is a 714 amino acid multi-pass membrane protein that belongs to the SLC12A transporter family. The SLC12A8 protein is nearly ubiquitously expressed with very low level in normal skin, and highest levels in small intestine, stomach, testis, thyroid and colon. SLC12A8 is a cation/chloride cotransporter that may play a role in the control of keratinocyte proliferation. The SLC12A8 protein shows homology to Na/K/Cl cotransporters, a family of membrane proteins responsible for electroneutral ion transport across a variety of cell types. It has been suggested that SLC12A8 could be identified as a candidate gene for psoriasis susceptibility. SLC12A8 is retinoid responsive. Existing as five alternatively spliced isoforms, the SLC12A8 gene is conserved in chimpanzee, canine, bovine, mouse, rat, zebrafish, fruit fly, mosquito and *C. elegans*, and maps to human chromosome 3q21.2. The SLC12A8 gene contains 13 exons and spans over 100 kb.

REFERENCES

- Hewett, D., et al. 2002. Identification of a psoriasis susceptibility candidate gene by linkage disequilibrium mapping with a localized single nucleotide polymorphism map. *Genomics* 79: 305-314.
- Hebert, S.C., et al. 2004. Molecular physiology of cation-coupled Cl⁻ cotransport: the SLC12 family. *Pflügers Arch.* 447: 580-593.
- Hüffmeier, U., et al. 2005. Systematic linkage disequilibrium analysis of SLC12A8 at PSORS5 confirms a role in susceptibility to psoriasis vulgaris. *J. Invest. Dermatol.* 125: 906-912.
- Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611316. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Nelson, A.M., et al. 2009. Early gene changes induced by isotretinoin in the skin provide clues to its mechanism of action. *Dermatoendocrinol.* 1: 100-101.
- Daigle, N.D., et al. 2009. Molecular characterization of a human cation-Cl⁻ cotransporter (SLC12A8A, CCC9A) that promotes polyamine and amino acid transport. *J. Cell. Physiol.* 220: 680-689.

CHROMOSOMAL LOCATION

Genetic locus: Slc12a8 (mouse) mapping to 16 B3.

PRODUCT

SLC12A8 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLC12A8 shRNA Plasmid (m): sc-153489-SH and SLC12A8 shRNA (m) Lentiviral Particles: sc-153489-V as alternate gene silencing products.

For independent verification of SLC12A8 (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-153489A, sc-153489B and sc-153489C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SLC12A8 siRNA (m) is recommended for the inhibition of SLC12A8 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 μ M in 66 μ l. 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 SLC12A8 gene expression knockdown using RT-PCR Primer: SLC12A8 (m)-PR: sc-153489-PR (20 μ l). 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.