

SLC43A3 siRNA (h): sc-96371

BACKGROUND

SLC43A3 (solute carrier family 43, member 3), also known as EEG1 (embryonic epithelia gene 1), FOAP-13, PRO1659 or SEEEG-1, is a 491 amino acid multi-pass membrane protein that belongs to the SLC43A transporter family. Highly expressed in macrophages, SLC43A3 is thought to function as a transporter of metabolites and nutrients that are necessary during developmental events, such as organogenesis. Specifically, SLC43A3 is involved in epithelial development, including the formation of cell sheets and hollow tubes that are used for membrane interface and molecular transport. Multiple isoforms of SLC43A3 exist due to alternative splicing events.

REFERENCES

- Li, M.S., et al. 1995. Human eosinophil major basic protein, a mediator of allergic inflammation, is expressed by alternative splicing from two promoters. *Biochem. J.* 305: 921-927.
- Stuart, R.O., et al. 2001. EEG1, a putative transporter expressed during epithelial organogenesis: comparison with embryonic transporter expression during nephrogenesis. *Am. J. Physiol. Renal Physiol.* 281: F1148-F1156.
- Otsuki, T., et al. 2005. Signal sequence and keyword trap in silico for selection of full-length human cDNAs encoding secretion or membrane proteins from oligo-capped cDNA libraries. *DNA Res.* 12: 117-126.
- Piva, R., et al. 2006. Functional validation of the anaplastic lymphoma kinase signature identifies CEBPB and BCL2A1 as critical target genes. *J. Clin. Invest.* 116: 3171-3182.

CHROMOSOMAL LOCATION

Genetic locus: SLC43A3 (human) mapping to 11q12.1.

PRODUCT

SLC43A3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLC43A3 shRNA Plasmid (h): sc-96371-SH and SLC43A3 shRNA (h) Lentiviral Particles: sc-96371-V as alternate gene silencing products.

For independent verification of SLC43A3 (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-96371A, sc-96371B and sc-96371C.

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

SLC43A3 siRNA (h) is recommended for the inhibition of SLC43A3 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 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.

GENE EXPRESSION MONITORING

SLC43A3 (E-10): sc-515451 is recommended as a control antibody for monitoring of SLC43A3 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 reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SLC43A3 gene expression knockdown using RT-PCR Primer: SLC43A3 (h)-PR: sc-96371-PR (20 μ l, 438 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

- Mender, I., et al. 2020. SLC43A3 is a biomarker of sensitivity to the telomeric DNA damage mediator 6-Thio-2'-deoxyguanosine. *Cancer Res.* E-published.

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.