SANTA CRUZ BIOTECHNOLOGY, INC.

SAT-1 siRNA (h): sc-89262

BACKGROUND

SAT-1 (sulfate anion transporter 1), also known as SLC26A1 (solute carrier family 26 (sulfate transporter), member 1) or EDM4, is a 701 amino acid multi-pass membrane protein that belongs to the SLC26A/SulP transporter family of proteins. Members of this family are sulfate/anion transporter proteins that are well conserved in their genomic (number and size of exons) and protein (amino acid length among species) structures, yet they exhibit very restricted and distinct tissue expression patterns. SAT-1 is predominantly expressed in kidney and liver but can also be found at lower levels in spleen, small intestine, brain, pancreas, leukocytes, prostate, thymus, testis and colon. Localized to the plasma membrane, SAT-1 contains one STAS domain, 12 transmembrane domains, 2 N-glycosylation sites and multiple phosphorylation sites. Accepting oxalate as a cosubstrate, SAT-1 participates in transtubular sulfate reabsorption by mediating the exit of sulfate across the basolateral membrane.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SLC26A1 (human) mapping to 4p16.3.

PROTOCOLS

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

PRODUCT

SAT-1 siRNA (h) is a target-specific 19-25 nt siRNA 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 SAT-1 shRNA Plasmid (h): sc-89262-SH and SAT-1 shRNA (h) Lentiviral Particles: sc-89262-V as alternate gene silencing products.

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

SAT-1 siRNA (h) is recommended for the inhibition of SAT-1 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 SAT-1 gene expression knockdown using RT-PCR Primer: SAT-1 (h)-PR: sc-89262-PR (20 µl). 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.