SANTA CRUZ BIOTECHNOLOGY, INC.

ATP13A1 siRNA (h): sc-97321

BACKGROUND

ATP13A1 (ATPase type 13A1), also known as probable cation-transporting ATPase 13A1 or ATP13A, is a 1,204 amino acid multi-pass membrane protein belonging to the cation transport ATPase (P-type) family and the type V subfamily. Highly conserved, ATP13A1 exists as three alternatively spliced isoforms. ATP13A1 participates in ATP, metal ion and nucleotide binding, ATPase activity, and hydrolase activity, such as acting on acid anhydrides and catalyzing transmembrane substance movement. ATP13A1 is encoded by a gene that maps to human chromosome 19p13.11. Chromosome 19 consists of approximately 63 million bases and makes up over 2% of human genomic DNA. Chromosome 19 contains the greatest gene density of the human chromosomes and is the genetic home for a number of immunoglobulin superfamily members, including killer cell and leukocyte Ig-like receptors, ICAMs, the CEACAM and PSG families, and Fcα receptors.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ATP13A1 (human) mapping to 19p13.11.

PROTOCOLS

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

PRODUCT

ATP13A1 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 ATP13A1 shRNA Plasmid (h): sc-97321-SH and ATP13A1 shRNA (h) Lentiviral Particles: sc-97321-V as alternate gene silencing products.

For independent verification of ATP13A1 (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-97321A, sc-97321B and sc-97321C.

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

ATP13A1 siRNA (h) is recommended for the inhibition of ATP13A1 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 ATP13A1 gene expression knockdown using RT-PCR Primer: ATP13A1 (h)-PR: sc-97321-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.