SANTA CRUZ BIOTECHNOLOGY, INC.

ATP8B3 siRNA (m): sc-141366

BACKGROUND

P-type ATPases, which are phosphorylated in their intermediate state, drive uphill transport of ions across membranes. ATP8B3 (ATPase class I type 8B member 3), also known as probable phospholipid-transporting ATPase IK, is a 1,300 amino acid multi-pass membrane protein that belongs to the cation transport ATPase (P-type) family and type IV subfamily. The ATP8B3 protein does not bind Cdc50A and Cdc50B and localizes to endoplasmic reticulum expressed exclusively to testis. The ATP8B3 gene exists as two alternatively spliced isoforms, is conserved in canine, mouse, rat, chicken and zebrafish, and maps to human chromosome 19p13.3. Chromosome 19 consists of approximately 63 million bases and makes up over 2% of human genomic DNA. Key genes for eye color and hair color map to chromosome 19. Peutz-Jeghers syndrome, spinocerebellar ataxia type 6, the stroke disorder CADASIL, hypercholesterolemia and Insulin-dependent diabetes have been linked to chromosome 19.

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Atp8b3 (mouse) mapping to 10 C1.

PRODUCT

ATP8B3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ATP8B3 shRNA Plasmid (m): sc-141366-SH and ATP8B3 shRNA (m) Lentiviral Particles: sc-141366-V as alternate gene silencing products.

For independent verification of ATP8B3 (m) gene silencing results, we a lso provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-141366A, sc-141366B and sc-141366C.

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

ATP8B3 siRNA (m) is recommended for the inhibition of ATP8B3 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 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 ATP8B3 gene expression knockdown using RT-PCR Primer: ATP8B3 (m)-PR: sc-141366-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.