SANTA CRUZ BIOTECHNOLOGY, INC.

ATP9B siRNA (m): sc-141369

BACKGROUND

ATP9B (ATPase, class II, type 9B), also known as NEO1L, ATPIIB or ATPASEP, is a 1,147 amino acid multi-pass membrane protein that belongs to the cation transport family of P-type ATPases. Existing as multiple alternatively spliced isoforms, ATP9B functions to catalyze the decomposition of ATP to ADP and phosphate, a reaction that is H_2O-dependent and drives the transport of phospholipids across the membrane. The gene encoding ATP9B maps to human chromosome 18q23, which houses over 300 protein-coding genes and contains nearly 76 million bases. There are a variety of diseases associated with defects in chromosome 18-localized genes, some of which include Trisomy 18 (also known as Edwards syndrome), Niemann-Pick disease, hereditary hemorrhagic telangiectasia, erythropoietic protoporphyria and follicular lymphomas.

REFERENCES

1. Carstea, E.D., et al. 1993. Linkage of Niemann-Pick disease type C to human chromosome 18. Proc. Natl. Acad. Sci. USA 90: 2002-2004.
2. Maeda, M., et al. 1998. Structures of P-type transporting ATPases and chromosomal locations of their genes. Cell Struct. Funct. 23: 315-323.
3. Halleck, M.S., et al. 1998. Multiple members of a third subfamily of P-type ATPases identified by genomic sequences and ESTs. Genome Res. 8: 354-361.
4. Halleck, M.S., et al. 1999. Differential expression of putative transbilayer amphipath transporters. Physiol. Genomics 1: 139-150.
5. Schultheis, P.J., et al. 2004. Characterization of the P5 subfamily of P-type transport ATPases in mice. Biochem. Biophys. Res. Commun. 323: 731-738.
6. Grosso, S., et al. 2005. Chromosome 18 aberrations and epilepsy: a review. Am. J. Med. Genet. A 134A: 88-94.

CHROMOSOMAL LOCATION

Genetic locus: Atp9b (mouse) mapping to 18 E3.

PRODUCT

ATP9B 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 ATP9B shRNA Plasmid (m): sc-141369-SH and ATP9B shRNA (m) Lentiviral Particles: sc-141369-V as alternate gene silencing products.

For independent verification of ATP9B (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-141369A, sc-141369B and sc-141369C.

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.

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

ATP9B siRNA (m) is recommended for the inhibition of ATP9B 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 ATP9B gene expression knockdown using RT-PCR Primer: ATP9B (m)-PR: sc-141369-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.