SANTA CRUZ BIOTECHNOLOGY, INC.

ATP8B5 siRNA (m): sc-140041

BACKGROUND

P-type ATPases, which are phosphorylated in their intermediate state, drive uphill transport of ions across membranes. ATP8B5 (ATPase, class I, type 8B, member 5), also known as Feta (flippase expressed in testis splicing form A) or 4930417M19Rik, is a 1,183 amino acid multi-pass membrane protein that is highly expressed in testis. Belonging to the cation transport ATPase (P-type) family and Type IV subfamily, ATP8B5 may be involved in phospholid transport across membranes and in acrosome formation. It is suggested that ATP8B5 plays an essential role on Golgi morphology and secretory function, thereby making it a crucial component of spermatogenesis. ATP8B5 localizes to cytoplasmic vesicle, secretory vesicle and acrosome membrane, and is expressed as three alternatively spliced isoforms. ATP8B5 is encoded by a gene located on mouse chromosome 4 A5.

REFERENCES

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2. Folmer, D.E., Elferink, R.P. and Paulusma, C.C. 2009. P4 ATPases-lipid flippases and their role in disease. Biochim. Biophys. Acta 1791: 628-635.
3. Xu, P., Okkeri, J., Hanisch, S., Hu, R.Y., Xu, Q., Pomorski, T.G. and Ding, X.Y. 2009. Identification of a novel mouse P4-ATPase family member highly expressed during spermatogenesis. J. Cell Sci. 122: 2866-2876.
4. van der Velden, L.M., van de Graaf, S.F. and Klomp, L.W. 2010. Biochemical and cellular functions of P4 ATPases. Biochem. J. 431: 1-11.
5. Paulusma, C.C. and Elferink, R.P. 2010. P4 ATPases—the physiological relevance of lipid flipping transporters. FEBS Lett. 584: 2708-2716.
6. Tanaka, K., Fujimura-Kamada, K. and Yamamoto, T. 2011. Functions of phospholipid flippases. J. Biochem. 149: 131-143.
7. SWISS-PROT/TrEMBL (A3FIN4). World Wide Web URL: http://www.uniprot.org/uniprot/A3FIN4

CHROMOSOMAL LOCATION

Genetic locus: Atp8b5 (mouse) mapping to 4 A5.

PRODUCT

ATP8B5 siRNA (m) 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 ATP8B5 shRNA Plasmid (m): sc-140041-SH and ATP8B5 shRNA (m) Lentiviral Particles: sc-140041-V as alternate gene silencing products.

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

ATP8B5 siRNA (m) is recommended for the inhibition of ATP8B5 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 ATP8B5 gene expression knockdown using RT-PCR Primer: ATP8B5 (m)-PR: sc-140041-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.