SANTA CRUZ BIOTECHNOLOGY, INC.

Pmp34 siRNA (h): sc-76179

BACKGROUND

Peroxisomes perform many functions within the eukaryotic cell, including meta-bolism of fatty acids and toxins, importing proteins into organelles and aiding in proliferation. Proliferation of peroxisomes is independent of cell division and can be chemically induced. Pmp34 (34 kDa peroxisomal membrane protein), also known as solute carrier family 25 member 17 (SLC25A17), is a 307 amino acid protein that acts as a as an adenine nucleotide transporter and possibly is involved in the transport of ATP across the peroxisomal membrane. The yeast homolog of Pmp34 participates in peroxisomal proliferation. Pmp34 contains at least two sets of targeting information that results in its insertion into the membrane. Pex19, a protein necessary for early peroxisomal biogenesis, interacts with Pmp34 in the cytosol, and it is suggested that Pex19 may play a key role in Pmp integration into the peroxisomal membrane.

REFERENCES

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2. Nakagawa, T., et al. 2000. Peroxisomal membrane protein Pmp47 is essential in the metabolism of middle-chain fatty acid in yeast peroxisomes and Is associated with peroxisome proliferation. J. Biol. Chem. 275: 3455-3461.
3. Sacksteder, K.A., et al. 2000. PEX19 binds multiple peroxisomal membrane proteins, is predominantly cytoplasmic, and is required for peroxisome membrane synthesis. J. Cell Biol. 148: 931-944.
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6. Fukao, Y., et al. 2001. Developmental analysis of a putative ATP/ADP carrier protein localized on glyoxysomal membranes during the peroxisome transition in pumpkin cotyledons. Plant Cell Physiol. 42: 835-841.
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CHROMOSOMAL LOCATION

Genetic locus: SLC25A17 (human) mapping to 22q13.2.

PROTOCOLS

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

PRODUCT

Pmp34 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 Pmp34 shRNA Plasmid (h): sc-76179-SH and Pmp34 shRNA (h) Lentiviral Particles: sc-76179-V as alternate gene silencing products.

For independent verification of Pmp34 (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-76179A, sc-76179B and sc-76179C.

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

Pmp34 siRNA (h) is recommended for the inhibition of Pmp34 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 Pmp34 gene expression knockdown using RT-PCR Primer: Pmp34 (h)-PR: sc-76179-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.