

Pxmp2 siRNA (m): sc-152603

BACKGROUND

Peroxisomes are subcellular organelles with important functions in lipid metabolism that are found in virtually all eucaryotic cells. The peroxisomal membrane contains a number of integral and peripheral membrane proteins involved in the import of peroxisomal matrix proteins and the transport of metabolites across the membrane. Pxmp2 (peroxisomal membrane protein 2), also known as PMP22, is a 195 amino acid multi-pass membrane protein that belongs to the peroxisomal membrane protein PXMP2/4 family. The Pxmp2 protein interacts with both Peroxin 19 and Siva proteins. The Peroxin 19 protein binds multiple peroxisomal membrane proteins (PMPs), is predominantly cytoplasmic, and is required for peroxisome membrane synthesis. Pxmp2 is the most abundant peroxisomal membrane protein in higher eukaryotes. Pxmp2's expression is tissue-specific with highest levels of expression in liver, kidney and heart tissue. It has been suggested that Pxmp2 is involved in pore-forming activity and may contribute to the broad permeability of the peroxisomal membrane. Disruption of the mouse Pxmp2 gene leads to partial restriction of peroxisomal membrane permeability to solutes *in vitro* and *in vivo*. The Pxmp2 gene is conserved in chimpanzee, canine, bovine, mouse, rat, zebrafish, fruit fly and mosquito, and maps to human chromosome 12q24.33.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Pxmp2 (mouse) mapping to 5 F.

PRODUCT

Pxmp2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Pxmp2 shRNA Plasmid (m): sc-152603-SH and Pxmp2 shRNA (m) Lentiviral Particles: sc-152603-V as alternate gene silencing products.

For independent verification of Pxmp2 (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-152603A, sc-152603B and sc-152603C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Pxmp2 siRNA (m) is recommended for the inhibition of Pxmp2 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 μ M in 66 μ l. 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 Pxmp2 gene expression knockdown using RT-PCR Primer: Pxmp2 (m)-PR: sc-152603-PR (20 μ l). 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.