SANTA CRUZ BIOTECHNOLOGY, INC.

Peroxin 10 siRNA (m): sc-106397

BACKGROUND

Peroxisomes are single-membrane bound organelles present in virtually all eukaryotic cells. They are involved in numerous catabolic and anabolic pathways, including β-oxidation of very long chain fatty acids, metabolism of hydrogen peroxide, plasmalogen biosynthesis and bile acid synthesis. The Peroxin gene family, which includes more than 20 members, is required for peroxisome biogenesis. Peroxin 10 (peroxisome biogenesis factor 10), also known as RNF69 (RING finger protein 69), is a 326 amino acid protein that exhibits E3 ligase activity *in vitro,* suggesting that it is involved in UBC4-dependent ubiquination. Defects in the gene encoding Peroxin 10 are the result of a number of different disorders, such as Peroxisome biogenesis disorder complementation group 7, Zellweger syndrome and adrenoleukodystrophy neonatal. There are two isoforms of Peroxin 10 that are produced as a result of alternative splicing events.

REFERENCES

1. Warren, D.S., et al. 1998. Identification of PEX10, the gene defective in complementation group 7 of the peroxisome-biogenesis disorders. Am. J. Hum. Genet. 63: 347-359.
2. Okumoto, K., et al. 1998. Mutations in PEX10 is the cause of Zellweger peroxisome deficiency syndrome of complementation group B. Hum. Mol. Genet. 7: 1399-1405.
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.
4. Fransen, M., et al. 2001. Human pex19p binds peroxisomal integral membrane proteins at regions distinct from their sorting sequences. Mol. Cell. Biol. 21: 4413-4424.
5. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 602859. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Pex10 (mouse) mapping to 4 E2.

PRODUCT

Peroxin 10 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 Peroxin 10 shRNA Plasmid (m): sc-106397-SH and Peroxin 10 shRNA (m) Lentiviral Particles: sc-106397-V as alternate gene silencing products.

For independent verification of Peroxin 10 (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-106397A, sc-106397B and sc-106397C.

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

Peroxin 10 siRNA (m) is recommended for the inhibition of Peroxin 10 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 Peroxin 10 gene expression knockdown using RT-PCR Primer: Peroxin 10 (m)-PR: sc-106397-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.