SANTA CRUZ BIOTECHNOLOGY, INC.

PET112L siRNA (m): sc-76109

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The Power to Question

BACKGROUND

PET112L is the human homolog of the *S. cerevisiae* COX assembly protein pet112, a protein that is believed to play an important role in the translation of mitochondrial genes. PET112L, also known as HSPC199 or Glu-ADT subunit B (glutamyl-tRNA(Gln) amidotransferase subunit B), is a 557 amino acid protein belonging to the gatB/gatE family of proteins (GatB subfamily) and is believed to play a role in energy metabolism. Localizing to mitochondria, PET112L is expressed in tissues such as heart and muscle, which exhibit high rates of oxidative phosphorylation. The gene encoding PET112L is overexpressed in recurrent ependymoma.

REFERENCES

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3. Kim, S.I., et al. 1997. A nuclear genetic lesion affecting *Saccharomyces cerevisiae* mitochondrial translation is complemented by a homologous bacillus gene. J. Bacteriol. 179: 5625-5627.
4. Petruzzella, V., et al. 1998. Identification and characterization of human cDNAs specific to BCS1, PET112, SCO1, COX15, and COX11, five genes involved in the formation and function of the mitochondrial respiratory chain. Genomics 54: 494-504.
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6. Yamamoto, T., et al. 2003. Gene profiling in human periodontal ligament fibroblasts by subtractive hybridization. J. Dent. Res. 82: 641-645.
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CHROMOSOMAL LOCATION

Genetic locus: Pet112 (mouse) mapping to 3 F1.

PRODUCT

PET112L 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 PET112L shRNA Plasmid (m): sc-76109-SH and PET112L shRNA (m) Lentiviral Particles: sc-76109-V as alternate gene silencing products.

For independent verification of PET112L (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-76109A, sc-76109B and sc-76109C.

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

PET112L siRNA (m) is recommended for the inhibition of PET112L 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 PET112L gene expression knockdown using RT-PCR Primer: PET112L (m)-PR: sc-76109-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.