SANTA CRUZ BIOTECHNOLOGY, INC.

HSPC121 siRNA (m): sc-146106

BACKGROUND

HSPC121, also known as PTPLAD1 (protein tyrosine phosphatase-like A domain containing 1), BIND1 or HACD3 (3-hydroxyacyl-CoA dehydratase 3), is a 362 amino acid multi-pass membrane protein that belongs to the very long-chain fatty acids dehydratase HACD family. Localizing to the endoplasmic reticulum membrane, HSPC121 is highly expressed in testis, kidney, brain and liver, with lower levels of expression found in skeletal muscle, spleen and heart. HSPC121 contains one CS domain and is induced by AKAP 12, as well as by histone deacetylase inhibitors, and interacts directly Rac 1 and various condensation enzymes of the ELOVL family. Interactions between HSPC121 and the Rac 1 signaling pathway leads to the modulation of gene expression. HSPC121 is also involved in the dehydration step during the synthesis of very long-chain fatty acids (VLCFAs).

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Ptplad1 (mouse) mapping to 9 C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

HSPC121 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 HSPC121 shRNA Plasmid (m): sc-146106-SH and HSPC121 shRNA (m) Lentiviral Particles: sc-146106-V as alternate gene silencing products.

For independent verification of HSPC121 (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-146106A, sc-146106B and sc-146106C.

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

HSPC121 siRNA (m) is recommended for the inhibition of HSPC121 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 HSPC121 gene expression knockdown using RT-PCR Primer: HSPC121 (m)-PR: sc-146106-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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