SANTA CRUZ BIOTECHNOLOGY, INC.

MBOAT4 siRNA (h): sc-77559

BACKGROUND

MBOAT4 (membrane-bound O-acyltransferase domain-containing protein 4, ghrelin O-acyltransferase) is a 435 amino acid, multi-pass membrane protein that belongs to the membrane-bound acyltransferase family. MBOAT4 functions as an enzyme that attaches an octanoate fatty acid to serine-3 of ghrelin. Ghrelin is a very small, appetite-stimulating hormone secreted by the food-deprived stomach. MBOAT4 can use a variety of fatty acids as substrates including octanoic acid, decanoic acid and tetradecanoic acid. MBOAT4 expression, consistent with its function, is mainly in the stomach and intestines. Due to its primary function, MBOAT4 is a candidate for obesity and appetite suppression studies.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: MBOAT4 (human) mapping to 8p12.

PRODUCT

MBOAT4 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 MBOAT4 shRNA Plasmid (h): sc-77559-SH and MBOAT4 shRNA (h) Lentiviral Particles: sc-77559-V as alternate gene silencing products.

For independent verification of MBOAT4 (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-77559A, sc-77559B and sc-77559C.

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

MBOAT4 siRNA (h) is recommended for the inhibition of MBOAT4 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 MBOAT4 gene expression knockdown using RT-PCR Primer: MBOAT4 (h)-PR: sc-77559-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.

PROTOCOLS

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