SANTA CRUZ BIOTECHNOLOGY, INC.

OBP-2A siRNA (h): sc-92478

BACKGROUND

The Lipocalin protein family is a large group of small extracellular proteins that function as carriers for hydrophobic molecules in many biological fluids. In the oral sphere (nasal mucus, saliva, tears), Lipocalins have an environmental biosensor function and are involved in the detection of odors and pheromones. OBPs (odorant-binding proteins) are Lipocalins secreted by the olfactory epithelium in mammals and are found freely dissolved in the mucus layer protecting the olfactory neurons. OBPs may act as passive transporters of predominantly hydrophobic odorant molecules across the aqueous mucus layer, or they may play a more active role through recognition by the olfactory neuronal receptor. OBP-2A (odorant-binding protein 2a) is a 170 amino acid protein that may have a high affinity for binding to and transporting aldehydes and large fatty acids. Existing as four alternatively spliced isoforms, OBP-2A is strongly expressed in the nasal structures, salivary and lachrymal glands, and lung.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: OBP2A (human) mapping to 9q34.3.

RESEARCH USE

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

PRODUCT

OBP-2A siRNA (h) is a target-specific 19-25 nt siRNA 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 OBP-2A shRNA Plasmid (h): sc-92478-SH and OBP-2A shRNA (h) Lentiviral Particles: sc-92478-V as alternate gene silencing 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

OBP-2A siRNA (h) is recommended for the inhibition of OBP-2A 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 OBP-2A gene expression knockdown using RT-PCR Primer: OBP-2A (h)-PR: sc-92478-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.