

TAAR5 siRNA (m): sc-61376

BACKGROUND

The novel family of G protein-coupled receptors known as trace-amine-associated receptors, TAAR, are biogenic amines present in very low levels in mammalian tissue. These proteins have defined roles as neurotransmitters in invertebrates, making their receptors significant therapeutic targets. TAAR5 (trace amine-associated receptor 5, PNR) is a multi-pass 338 amino acid membrane protein expressed almost exclusively in skeletal muscle and selected areas of the brain, such as the amygdala, hippocampus, caudate nucleus, thalamus and hypothalamus, with weak expression also observed in the substantia nigra. It contains a seven-transmembrane domain characteristic of G protein-coupled receptors and a potential N-glycosylation site. TAAR proteins, including TAAR5, are being investigated as potential targets for drugs of abuse including amphetamine and MDMA as well as neuropsychiatric disorders such as schizophrenia, depression and attention deficit disorder.

REFERENCES

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3. Lee, D.K., et al. 2000. Cloning and characterization of additional members of the G protein-coupled receptor family. *Biochim. Biophys. Acta* 1490: 311-323.
4. Lee, S.P., et al. 2000. Inhibition of cell surface expression by mutant receptors demonstrates that D2 dopamine receptors exist as oligomers in the cell. *Mol. Pharmacol.* 58: 120-128.
5. Nabbout, R., et al. 2002. A locus for simple pure febrile seizures maps to chromosome 6q22-q24. *Brain* 125: 2668-2680.
6. Duan, J., et al. 2004. Polymorphisms in the trace amine receptor 4 (TRAR4) gene on chromosome 6q23.2 are associated with susceptibility to schizophrenia. *Am. J. Hum. Genet.* 75: 624-638.
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CHROMOSOMAL LOCATION

Genetic locus: Taar5 (mouse) mapping to 10 A4.

PRODUCT

TAAR5 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TAAR5 shRNA Plasmid (m): sc-61376-SH and TAAR5 shRNA (m) Lentiviral Particles: sc-61376-V as alternate gene silencing products.

For independent verification of TAAR5 (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-61376A, sc-61376B and sc-61376C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

TAAR5 siRNA (m) is recommended for the inhibition of TAAR5 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 μ M in 66 μ l. 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 TAAR5 gene expression knockdown using RT-PCR Primer: TAAR5 (m)-PR: sc-61376-PR (20 μ l). 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.