SANTA CRUZ BIOTECHNOLOGY, INC.

Olfr417 siRNA (m): sc-106325

BACKGROUND

Olfactory receptors are G protein-coupled receptors that localize to the cilia of olfactory sensory neurons where they display affinity for and bind to a variety of odor molecules. The genes encoding olfactory receptors comprise the largest family in the human genome. The binding of olfactory receptor proteins to odor molecules triggers a signal transduction that propagates nerve impulses throughout the body, ultimately leading to transmission of the signal to the brain and the subsequent perception of smell. Olfr417 (olfactory receptor 417) is a 309 amino acid protein belonging to the G protein-coupled receptor 1 family. The gene encoding Olfr417 maps to mouse chromosome 1 H3.

REFERENCES

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2. Young, J.M., Friedman, C., Williams, E.M., Ross, J.A., Tonnes-Priddy, L. and Trask, B.J. 2002. Different evolutionary processes shaped the mouse and human olfactory receptor gene families. Hum. Mol. Genet. 11: 535-546.
3. Zhang, X. and Firestein, S. 2002. The olfactory receptor gene superfamily of the mouse. Nat. Neurosci. 5: 124-133.
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5. Strotmann, J., Levai, O., Fleischer, J., Schwarzenbacher, K. and Breer, H. 2004. Olfactory receptor proteins in axonal processes of chemosensory neurons. J. Neurosci. 24: 7754-7761.
6. Nguyen-Ba-Charvet, K.T., Di Meglio, T., Fouquet, C. and Chedotal, A. 2008. Robos and slits control the pathfinding and targeting of mouse olfactory sensory axons. J. Neurosci. 28: 4244-4249.

CHROMOSOMAL LOCATION

Genetic locus: Olfr417 (mouse) mapping to 1 H3.

PRODUCT

Olfr417 siRNA (m) 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 Olfr417 shRNA Plasmid (m): sc-106325-SH and Olfr417 shRNA (m) Lentiviral Particles: sc-106325-V as alternate gene silencing products.

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.

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

Olfr417 siRNA (m) is recommended for the inhibition of Olfr417 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 Olfr417 gene expression knockdown using RT-PCR Primer: Olfr417 (m)-PR: sc-106325-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.