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T2R31 siRNA (m): sc-154020

BACKGROUND

The sense of taste has been classified to the five basic taste qualities: sweet, salty, sour, bitter and umami. Ubiquitous G protein-coupled family of receptors play a major role in taste perception. Members of the G protein-coupled family including T1R triggers sweet and umami taste perception whereas T2R triggers bitter taste perception. Both types of taste receptors couple to various G proteins to initiate signal transduction cascades. Single taste receptor cells express a variety of T2Rs, suggesting that each cell is capable of recognizing multiple tastants. T2R31 (taste receptor type 2 member 31), also known as TAS2R31, TAS2R44 or T2R53, is a 309 amino acid protein that belongs to the G protein-coupled receptor T2R family. Localized to the cell membrane of gustducin-positive cells, T2R31 is a gustducin-coupled receptor for denatonium and N⁶-propyl-2-thiouracil and is involved in the perception of bitter compounds in the oral cavity and the gastrointestinal tract.

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CHROMOSOMAL LOCATION

Genetic locus: Tas2r131 (mouse) mapping to 6 G1.

PROTOCOLS

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

PRODUCT

T2R31 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 T2R31 shRNA Plasmid (m): sc-154020-SH and T2R31 shRNA (m) Lentiviral Particles: sc-154020-V as alternate gene silencing products.

For independent verification of T2R31 (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-154020A, sc-154020B and sc-154020C.

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

T2R31 siRNA (m) is recommended for the inhibition of T2R31 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 T2R31 gene expression knockdown using RT-PCR Primer: T2R31 (m)-PR: sc-154020-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.