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T2R37 siRNA (m): sc-154021

BACKGROUND

T2R37, also known as Tas2r3 (taste receptor type 2 member 3), T2R3, T2r41, Tas2r137 or Tas2r37, is a 316 amino acid multi-pass membrane protein that belongs to the G protein-coupled receptor T2R family. While it signals through PLC β 2 and the calcium-regulated cation channel TRPM5, T2R37 acts as a gustducin-coupled receptor implicated in the perception of bitter compounds in the oral cavity and the gastrointestinal tract. The gene that encodes T2R37 maps to mouse chromosome 6 B1. T2R37 is homologous to human T2R3, a 316 amino acid protein expressed in subsets of taste receptor cells of the tongue and palate epithelium. T2R3 maps to human chromosome 7, which encodes over 1,000 genes and makes up about 5% of the human genome.

REFERENCES

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3. Conte, C., et al. 2003. Evolutionary relationships of the Tas2r receptor gene families in mouse and human. *Physiol. Genomics* 14: 73-82.
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CHROMOSOMAL LOCATION

Genetic locus: Tas2r137 (mouse) mapping to 6 B1.

PRODUCT

T2R37 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 T2R37 shRNA Plasmid (m): sc-154021-SH and T2R37 shRNA (m) Lentiviral Particles: sc-154021-V as alternate gene silencing products.

For independent verification of T2R37 (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-154021A, sc-154021B and sc-154021C.

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

T2R37 siRNA (m) is recommended for the inhibition of T2R37 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.

GENE EXPRESSION MONITORING

T2R3 (E-12): sc-398489 is recommended as a control antibody for monitoring of T2R37 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor T2R37 gene expression knockdown using RT-PCR Primer: T2R37 (m)-PR: sc-154021-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.