SANTA CRUZ BIOTECHNOLOGY, INC.

T2R10 siRNA (h): sc-95848

BACKGROUND

T2R10 (taste receptor type 2 member 10), also known as TRB2 (taste receptor family B member 2) or TAS2R10, is a 307 amino acid multi-pass membrane protein that belongs to the G protein-coupled receptor T2R family. Members of the T2R family are genetically linked to loci that influence bitter perception in mice and humans. While expressed in subsets of taste receptor cells of the tongue and palate epithelium, T2R10 is found exclusively in gustducin-positive cells. T2R10 signals through PLC β2 and the calcium-regulated cation channel TRPM5. The gene that encodes T2R10 maps to human chromosome 12p13.2. Encoding over 1,100 genes, chromosome 12 comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

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6. Zhang, Y., et al. 2003. Coding of sweet, bitter, and umami tastes: different receptor cells sharing similar signaling pathways. Cell 112: 293-301.
7. Go, Y., et al. 2005. Lineage-specific loss of function of bitter taste receptor genes in humans and nonhuman primates. Genetics 170: 313-326.
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CHROMOSOMAL LOCATION

Genetic locus: TAS2R10 (human) mapping to 12p13.2.

PRODUCT

T2R10 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see T2R10 shRNA Plasmid (h): sc-95848-SH and T2R10 shRNA (h) Lentiviral Particles: sc-95848-V as alternate gene silencing products.

For independent verification of T2R10 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-95848A, sc-95848B and sc-95848C.

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

T2R10 siRNA (h) is recommended for the inhibition of T2R10 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 T2R10 gene expression knockdown using RT-PCR Primer: T2R10 (h)-PR: sc-95848-PR (20 µl). 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.