SANTA CRUZ BIOTECHNOLOGY, INC.

T2R16 siRNA (h): sc-89454

BACKGROUND

T2R16 (taste receptor type 2 member 16), also known as TAS2R16, is a 291 amino acid multi-pass membrane protein that belongs to the G protein-coupled receptor T2R family. Acting in the oral cavity and the gastrointestinal tract, T2R16 is a gustducin-coupled receptor that is implicated in the perception of bitter compounds. T2R16 mediates responses to certain taste through PLC β2, a phospholipase C selectively expressed in taste tissue, and the calcium-regulated cation channel TRPM5. Expressed in a subset of gustducin-positive taste receptor cells of the tongue and epithelia, T2R16 confers bitter perception of salicin to non-taster mice. The gene that encodes T2R16 consists of 996 bases and maps to human chromosome 7q31.32. Chromosome 7 houses over 1,000 genes, comprises nearly 5% of the human genome and has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome. The Lys-172 polymorphism in T2R16 is associated with genetic susceptibility to alcoholism.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TAS2R16 (human) mapping to 7q31.32.

PROTOCOLS

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

PRODUCT

T2R16 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 T2R16 shRNA Plasmid (h): sc-89454-SH and T2R16 shRNA (h) Lentiviral Particles: sc-89454-V as alternate gene silencing products.

For independent verification of T2R16 (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-89454A, sc-89454B and sc-89454C.

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

T2R16 siRNA (h) is recommended for the inhibition of T2R16 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 T2R16 gene expression knockdown using RT-PCR Primer: T2R16 (h)-PR: sc-89454-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.