

T1R1 (C-20): sc-22451

BACKGROUND

T1R1 (TR1, GPR70, gm148, taste receptor type 1 member 1, TAS1R1) is a G protein-coupled receptor and is a component of the heterodimeric amino acid taste receptor T1R1+3. T1R1+3 responds to L-amino acids that are perceived as sweet. Multiple transcript variants encoding several different isoforms have been found for this gene. The T1R receptors are a family of taste-specific class C G protein-coupled receptors. PLC12 and IP(3)R3 co-localize together with G₁₂ as downstream components of two different types of taste receptors, T1R and T2R, in taste bud cells.

REFERENCES

1. Miyoshi, M.A., et al. 2001. IP(3) receptor type 3 and PLCβ2 are co-expressed with taste receptors T1R and T2R in rat taste bud cells. *Chem. Senses* 26: 259-265.
2. Sainz, E., et al. 2001. Identification of a novel member of the T1R family of putative taste receptors. *J. Neurochem.* 77: 896-903.
3. Max, M., et al. 2001. TAS1R3, encoding a new candidate taste receptor, is allelic to the sweet responsiveness locus Sac. *Nat. Genet.* 28: 58-63.
4. Montmayeur, J.P., et al. 2001. A candidate taste receptor gene near a sweet taste locus. *Nat. Neurosci.* 4: 492-498.
5. Xu, H., et al. 2004. Different functional roles of T1R subunits in the heteromeric taste receptors. *Proc. Natl. Acad. Sci. USA* 101: 14258-14263.
6. Hiroi, M., et al. 2004. Two antagonistic gustatory receptor neurons responding to sweet-salty and bitter taste in *Drosophila*. *J. Neurobiol.* 61: 333-342.
7. Dyer, J., et al. 2005. Expression of sweet taste receptors of the T1R family in the intestinal tract and enteroendocrine cells. *Biochem. Soc. Trans.* 33: 302-305.
8. Winnig, M., et al. 2005. Valine 738 and lysine 735 in the fifth transmembrane domain of rTAS1R3 mediate insensitivity towards lactisole of the rat sweet taste receptor. *BMC Neurosci.* 6: 22.

CHROMOSOMAL LOCATION

Genetic locus: TAS1R1 (human) mapping to 1p36.31; Tas1r1 (mouse) mapping to 4 E2.

SOURCE

T1R1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of T1R1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22451 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

T1R1 (C-20) is recommended for detection of T1R1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

T1R1 (C-20) is also recommended for detection of T1R1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for T1R1 siRNA (h): sc-45318, T1R1 siRNA (m): sc-45319, T1R1 siRNA (r): sc-72244, T1R1 shRNA Plasmid (h): sc-45318-SH, T1R1 shRNA Plasmid (m): sc-45319-SH, T1R1 shRNA Plasmid (r): sc-72244-SH, T1R1 shRNA (h) Lentiviral Particles: sc-45318-V, T1R1 shRNA (m) Lentiviral Particles: sc-45319-V and T1R1 shRNA (r) Lentiviral Particles: sc-72244-V.

Molecular Weight of T1R1: 93.4 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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