T1R1 (I-20): sc-34054



The Power to Question

BACKGROUND

T1R1 (TR1, T1R1, 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. PLC β 2 and IP $_3$ R3 colocalize together with G_{12} as downstream components of two different types of taste receptors, T1R and T2R, in taste bud cells.

REFERENCES

- Miyoshi, M.A., et al. 2001. IP₃ receptor type 3 and PLCβ2 are co-expressed with taste receptors T1R and T2R in rat taste bud cells. Chem. Senses 26: 259-265.
- Sainz, E., et al. 2001. Identification of a novel member of the T1R family of putative taste receptors. J. Neurochem. 77: 896-903.
- Montmayeur, J.P., et al. 2001. A candidate taste receptor gene near a sweet taste locus. Nat. Neurosci. 4: 492-498.
- 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.
- Xu, H., et al. 2004. Different functional roles of T1R subunits in the heteromeric taste receptors. Proc. Natl. Acad. Sci. USA 101: 14258-14263.
- Hiroi, M., et al. 2004. Two antagonistic gustatory receptor neurons responding to sweet-salty and bitter taste in *Drosophila*. J. Neurobiol. 61: 333-342.
- 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 (mouse) mapping to 4 E2.

SOURCE

T1R1 (I-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of T1R1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-34054 P, (100 μ g 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 (I-20) is recommended for detection of T1R1 of mouse and rat 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).

Suitable for use as control antibody for T1R1 siRNA (m): sc-45319 and T1R1 siRNA (r): sc-72244.

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) 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.

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