SANTA CRUZ BIOTECHNOLOGY, INC.

T1R1 (M-210): sc-50308

SANTA CRUZ BIOTECHNOLOGY

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. PLCβ2 and IP3R3 co-localize together with $G_{i\ 2}$ 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. 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.
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 (mouse) mapping to 4 E2.

SOURCE

T1R1 (M-210) is a rabbit polyclonal antibody raised against amino acids 87-296 mapping within an extracellular domain of T1R1 of mouse origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

T1R1 (M-210) is recommended for detection of T1R1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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, T1R1 siRNA (r): sc-72244, T1R1 shRNA Plasmid (m): sc-45319-SH, T1R1 shRNA Plasmid (r): sc-72244-SH, T1R1 shRNA (m) Lentiviral Particles: sc-45319-V and T1R1 shRNA (r) Lentiviral Particles: sc-72244-V.

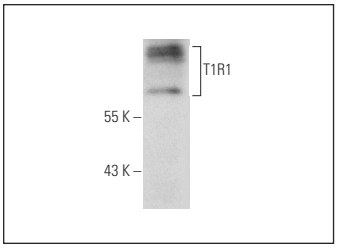
Molecular Weight of T1R1: 93.4 kDa.

Positive Controls: mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



T1R1 (M-210): sc-50308. Western blot analysis of T1R1 expression in mouse brain tissue extract.

RESEARCH USE

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

PROTOCOLS

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