

T2R7 (C-12): sc-377364

BACKGROUND

The sense of taste provides animals with valuable information about the quality and nutritional value of food. A family of G protein-coupled receptors are involved in taste perception and include T1R, which is involved in sweet and umami taste perception, and T2R, which is involved in bitter taste perception. Both types of taste receptors couple to various G proteins to initiate signal transduction cascades. Single taste receptor cells express a variety of T2Rs, suggesting that each cell is capable of recognizing multiple tastants. T2R6 (also designated T2R30, mt2r42, STC 7-4 or taste receptor, type 2, member 130) is an integral membrane receptor protein in mice that may play a role in the perception of bitterness and in sensing the chemical composition of the gastrointestinal content. The activity of this receptor may stimulate α -gustducin, mediate PLC- β -2 activation and lead to the gating of TRPM5. T2R6 is expressed in subsets of taste receptor cells of the tongue and palate epithelium and exclusively in gustducin-positive cells. The human homolog of T2R6, designated T2R7 (TAS2R7, TRB4 or taste receptor, type 2, member 7) is a G protein-coupled receptor expressed in taste receptor cells of the tongue and palate epithelia.

REFERENCES

- Amrein, H., et al. 2003. Bitter-sweet solution in taste transduction. *Cell* 112: 283-284.
- Zhang, Y., et al. 2003. Coding of sweet, bitter, and umami tastes: different receptor cells sharing similar signaling pathways. *Cell* 112: 293-301.
- Zhao, G.Q., et al. 2003. The receptors for mammalian sweet and umami taste. *Cell* 115: 255-266.
- Scott, K., et al. 2004. The sweet and the bitter of mammalian taste. *Curr. Opin. Neurobiol.* 14: 423-427.
- He, W., et al. 2004. Umami taste responses are mediated by α -transducin and α -gustducin. *J. Neurosci.* 24: 7674-7680.

CHROMOSOMAL LOCATION

Genetic locus: TAS2R7 (human) mapping to 12p13.2; Tas2r130 (mouse) mapping to 6 F3.

SOURCE

T2R7 (C-12) is a mouse monoclonal antibody raised against amino acids 141-200 mapping within an internal region of T2R7 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain 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.

RESEARCH USE

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

APPLICATIONS

T2R7 (C-12) is recommended for detection of T2R7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 T2R7 siRNA (h): sc-45336, T2R7 shRNA Plasmid (h): sc-45336-SH and T2R7 shRNA (h) Lentiviral Particles: sc-45336-V.

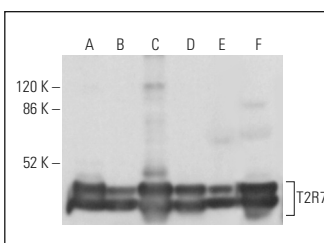
Molecular Weight of T2R7: 35 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, A549 cell lysate: sc-2413 or K-562 whole cell lysate: sc-2203.

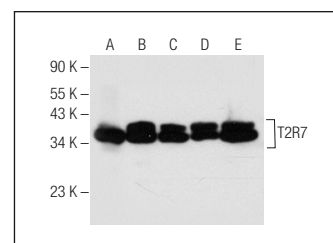
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



T2R7 (C-12): sc-377364. Western blot analysis of T2R7 expression in HL-60 (A), Jurkat (B), BYDP (C) and c4 (D) whole cell lysates and human artery (E) and rat tongue (F) tissue extracts.



T2R7 (C-12): sc-377364. Western blot analysis of T2R7 expression in A549 (A), HL-60 (B), Hep G2 (C), K-562 (D) and SCC-4 (E) whole cell lysates.

PROTOCOLS

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

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