

T2R104 (H-5): sc-515693



The Power to Question

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. T2R104 (taste receptor, type 2, member 104) is a 302 amino acid member of the G protein-coupled receptor T2R protein family. Localized to the cell membrane, T2R104 may be involved in the perception of bitter compounds in the oral cavity and the gastrointestinal tract. The gene encoding T2R104 is located on mouse chromosome 6 F3.

REFERENCES

- Chandrashekar, J., et al. 2000. T2Rs function as bitter taste receptors. *Cell* 100: 703-711.
- Matsunami, H., et al. 2000. A family of candidate taste receptors in human and mouse. *Nature* 404: 601-604.
- Kinnamon, S.C. 2000. A plethora of taste receptors. *Neuron* 25: 507-510.
- Ueda, T., et al. 2001. Identification of coding single-nucleotide polymorphisms in human taste receptor genes involving bitter tasting. *Biochem. Biophys. Res. Commun.* 285: 147-151.
- Montmayeur, J.P. and Matsunami, H. 2002. Receptors for bitter and sweet taste. *Curr. Opin. Neurobiol.* 12: 366-371.
- Margolskee, R.F. 2002. Molecular mechanisms of bitter and sweet taste transduction. *J. Biol. Chem.* 277: 1-4.
- Zhang, Y., et al. 2003. Coding of sweet, bitter, and umami tastes: different receptor cells sharing similar signaling pathways. *Cell* 112: 293-301.
- Go, Y., et al. 2005. Lineage-specific loss of function of bitter taste receptor genes in humans and nonhuman primates. *Genetics* 170: 313-326.
- Fischer, A., et al. 2005. Evolution of bitter taste receptors in humans and apes. *Mol. Biol. Evol.* 22: 432-436.

CHROMOSOMAL LOCATION

Genetic locus: Tas2r104 (mouse) mapping to 6 F3.

SOURCE

T2R104 (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 73-89 within an extracellular domain of T2R104 of rat origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

T2R104 (H-5) is recommended for detection of T2R104 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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 T2R104 siRNA (m): sc-154000, T2R104 shRNA Plasmid (m): sc-154000-SH and T2R104 shRNA (m) Lentiviral Particles: sc-154000-V.

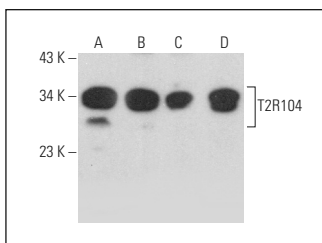
Molecular Weight of T2R104: 35 kDa.

Positive Controls: F9 cell lysate: sc-2245, C6 whole cell lysate: sc-364373 or rat testis extract: sc-2400.

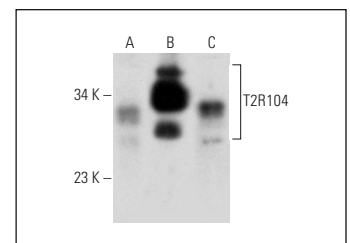
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



T2R104 (H-5): sc-515693. Western blot analysis of T2R104 expression in F9 (A), Neuro-2A (B) and AT3B-1 (C) whole cell lysates and rat brain tissue extract (D).



T2R104 (H-5): sc-515693. Western blot analysis of T2R104 expression in C6 (A) and F9 (B) whole cell lysates and rat testis tissue extract (C).

SELECT PRODUCT CITATIONS

- Schroer, A.B., et al. 2021. The stability of tastant detection by mouse lingual chemosensory tissue requires regulator of G protein signaling-21 (RGS21). *Chem. Senses* 46: bjab048.

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 for detailed protocols and support products.