

# T2R39 (A-16): sc-240954

## BACKGROUND

T2R39 (taste receptor type 2 member 39), also known as T2R57 (taste receptor type 2 member 57) or TAS2R39, is a 338 amino acid multi-pass membrane protein that belongs to the G-protein coupled receptor T2R family. T2R39 acts as a receptor that may play a role in the perception of bitterness, and is also thought to be involved in sensing the chemical composition of gastrointestinal content. As a gustducin-linked receptor, the activity of T2R39 may stimulate  $G_{\alpha t}$  ( $\alpha$  gustducin), mediate PLC  $\beta 2$  activation and lead to the gating of TRPM5. While expressed in subsets of taste receptor cells of the tongue and palate epithelium, T2R39 is found exclusively in gustducin-positive cells. The gene that encodes T2R39 contains 1,017 bases and maps to human chromosome 7q34. Chromosome 7 houses over 1,000 genes, comprises nearly 5% of the human genome and has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

## REFERENCES

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2. Iwasaki, S., et al. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. *Arch. Otolaryngol. Head Neck Surg.* 127: 705-708.
3. Montmayeur, J.P., et al. 2002. Receptors for bitter and sweet taste. *Curr. Opin. Neurobiol.* 12: 366-371.
4. Margolskee, R.F. 2002. Molecular mechanisms of bitter and sweet taste transduction. *J. Biol. Chem.* 277: 1-4.
5. Zhang, Y., et al. 2003. Coding of sweet, bitter, and umami tastes: different receptor cells sharing similar signaling pathways. *Cell* 112: 293-301.
6. Go, Y., et al. 2005. Lineage-specific loss of function of bitter taste receptor genes in humans and nonhuman primates. *Genetics* 170: 313-326.
7. Fischer, A., et al. 2005. Evolution of bitter taste receptors in humans and apes. *Mol. Biol. Evol.* 22: 432-436.
8. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular Med.* 8: 547-565.

## CHROMOSOMAL LOCATION

Genetic locus: Tas2r139 (mouse) mapping to 6 B2.1.

## SOURCE

T2R39 (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of T2R39 of mouse origin.

## STORAGE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-240954 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

T2R39 (A-16) is recommended for detection of T2R39 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); non cross-reactive with other T2R family members.

Suitable for use as control antibody for T2R39 siRNA (m): sc-154022, T2R39 shRNA Plasmid (m): sc-154022-SH and T2R39 shRNA (m) Lentiviral Particles: sc-154022-V.

Molecular Weight of T2R39: 39 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.