# SANTA CRUZ BIOTECHNOLOGY, INC.

# T2R10 (D-12): sc-169473



The Power to Question

#### BACKGROUND

T2R10 (taste receptor type 2 member 10), also known as TRB2 (taste receptor family B member 2) or TAS2R10, is a 307 amino acid multi-pass membrane protein that belongs to the G-protein coupled receptor T2R family. Members of the T2R family are genetically linked to loci that influence bitter perception in mice and humans. While expressed in subsets of taste receptor cells of the tongue and palate epithelium, T2R10 is found exclusively in gustducin-positive cells. T2R10 signals through PLC  $\beta$ 2 and the calcium-regulated cation channel TRPM5. The gene that encodes T2R10 maps to human chromosome 12p13. Encoding over 1,100 genes, chromosome 12 comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

#### REFERENCES

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- 2. Matsunami, H., et al. 2000. A family of candidate taste receptors in human and mouse. Nature 404: 601-604.
- 3. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604791. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 4. Montmayeur, J.P. and Matsunami, H. 2002. Receptors for bitter and sweet taste. Curr. Opin. Neurobiol. 12: 366-371.
- 5. Margolskee, R.F. 2002. Molecular mechanisms of bitter and sweet taste transduction. J. Biol. Chem. 277: 1-4.
- 6. Zhang, Y., et al. 2003. Coding of sweet, bitter, and umami tastes: different receptor cells sharing similar signaling pathways. Cell 112: 293-301.
- 7. Go, Y., et al. 2005. Lineage-specific loss of function of bitter taste receptor genes in humans and nonhuman primates. Genetics 170: 313-326.
- 8. Mueller, K.L., et al. 2005. The receptors and coding logic for bitter taste. Nature 434: 225-229.
- Wainwright, H. and Beighton, P. 2008. Visceral manifestations of hypochondrogenesis. Virchows Arch. 453: 203-207.

### CHROMOSOMAL LOCATION

Genetic locus: TAS2R10 (human) mapping to 12p13.2.

#### SOURCE

T2R10 (D-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an extracellular domain of T2R10 of human origin.

## PRODUCT

Each vial contains 100  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-169473 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### APPLICATIONS

T2R10 (D-12) is recommended for detection of T2R10 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) 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 T2R10 siRNA (h): sc-95848, T2R10 shRNA Plasmid (h): sc-95848-SH and T2R10 shRNA (h) Lentiviral Particles: sc-95848-V.

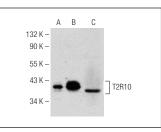
Molecular Weight of T2R10: 35 kDa.

Positive Controls: Human skeletal muscle tissue extract, SCC-4 whole cell lysate or SCC-25 whole cell lysate.

## **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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

# DATA



T2R10 (D-12): sc-169473. Western blot analysis of T2R10 expression in SCC-4 (**A**) and SCC-25 (**B**) whole cell lysates and human skeletal muscle tissue extract

(C).

#### **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.

#### PROTOCOLS

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