Tas2r140 (P-13): sc-169518

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tas2r140 (taste receptor type 2 member 140) is a 312 amino acid G protein-coupled receptor that belongs to the T2R family. Approximately 30 families of TAS2R bitter taste receptors has been identified in mammals. Tas2r140 is a multi-pass membrane protein believed to function as a taste receptor which may play a role in the perception of bitterness. Bitter taste perception is a conserved chemical sense against the ingestion of poisonous substances in mammals. A multigene family of G protein-coupled receptors, T2R (so-called TAS2R or TRB) receptors and a G-protein α subunit, gustducin, are believed to be key molecules for its perception.

REFERENCES

1. Ueda, T., Ugawa, S., Yamamura, H., Imaizumi, Y. and Shimada, S. 2003. Functional interaction between T2R taste receptors and G-protein α subunits expressed in taste receptor cells. J. Neurosci. 23: 7376-7380.

2. Ueda, T., Ugawa, S. and Shimada, S. 2005. Functional interaction between TAS2R receptors and G-protein α subunits expressed in taste receptor cells. Chem. Senses 30 Suppl. 1: i16.

3. Meyerhof, W. 2005. Elucidation of mammalian bitter taste. Rev. Physiol. Biochem. Pharmacol. 154: 37-72.

4. Kuhn, C., Bufe, B., Batram, C. and Meyerhof, W. 2010. Oligomerization of TAS2R bitter taste receptors. Chem. Senses 35: 395-406.

5. Behrens, M. and Meyerhof, W. 2010. Oral and extraoral bitter taste receptors. Results. Probl. Cell Differ. 52: 87-99.

6. Tizzano, M., Cristofoletti, M., Sbarbati, A. and Finger, T.E. 2011. Expression of taste receptors in solitary chemosensory cells of rodent airways. BMC Pulm. Med. 11: 3.

7. Hayes, J.E., Wallace, M.R., Knopik, V.S., Herbstman, D.M., Bartoshuk, L.M. and Duffy, V.B. 2011. Allelic variation in TAS2R bitter receptor genes associates with variation in sensations from and ingestive behaviors toward common bitter beverages in adults. Chem. Senses 36: 311-319.

8. Doggrell, S.A. 2011. Bitter taste receptors as a target for bronchodilation. Expert Opin. Ther. Targets 15: 899-902.

9. Roudnitzky, N., Bufe, B., Thalmann, S., Kuhn, C., Gunn, H.C., Xing, C., Crider, B.P., Behrens, M., Meyerhof, W. and Wooding, S.P. 2011. Genomic, genetic and functional dissection of bitter taste responses to artificial sweeteners. Hum. Mol. Genet. 20: 3437-3449.

CHROMOSOMAL LOCATION

Genetic locus: Tas2r140 (rat) mapping to 4q43.

SOURCE

Tas2r140 (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Tas2r140 of rat 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 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-169518 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tas2r140 (P-13) is recommended for detection of Tas2r140 of 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 Tas2r family members.

Molecular Weight of Tas2r140: 36 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 or our catalog for detailed protocols and support products.