

RTP1 (K-14): sc-103176

BACKGROUND

Members of the RTP (receptor transporter proteins) family have recently been discovered to influence bitter taste receptor expression in addition to inducing the expression of mammalian odorant receptors. RTP1 (receptor (chemosensory) transporter protein 1), whose alternative names include MGC35450 or receptor-transporting protein 1, is a 263 amino acid single-pass type III membrane protein whose cell surface expression is dependent on olfactory receptor interaction. RTP1 belongs to the TMEM7 family, playing a role in both the function of odorant receptors and their translocation to the plasma membrane. RTP1 is found in olfactory and vomeronasal organs with low expression in brain. While RTP1 lacks a signal peptide it contains a C-terminal transmembrane domain. The gene encoding RTP1 maps to human chromosome 3q27.3.

REFERENCES

1. Saito, H., Kubota, M., Roberts, R.W., Chi, Q. and Matsunami, H. 2004. RTP family members induce functional expression of mammalian odorant receptors. *Cell* 119: 679-691.
2. Clark, A.J., Metherell, L.A., Cheetham, M.E. and Huebner, A. 2005. Inherited ACTH insensitivity illuminates the mechanisms of ACTH action. *Trends Endocrinol. Metab.* 16: 451-457.
3. Behrens, M., Bartelt, J., Reichling, C., Winnig, M., Kuhn, C. and Meyerhof, W. 2006. Members of RTP and REEP gene families influence functional bitter taste receptor expression. *J. Biol. Chem.* 281: 20650-20659.
4. Zhuang, H. and Matsunami, H. 2007. Synergism of accessory factors in functional expression of mammalian odorant receptors. *J. Biol. Chem.* 282: 15284-15293.
5. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 609137. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: RTP1 (human) mapping to 3q27.3.

SOURCE

RTP1 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of RTP1 of human origin.

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-103176 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

RTP1 (K-14) is recommended for detection of RTP1 of human 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 RTP family members.

Suitable for use as control antibody for RTP1 siRNA (h): sc-78411, RTP1 shRNA Plasmid (h): sc-78411-SH and RTP1 shRNA (h) Lentiviral Particles: sc-78411-V.

Molecular Weight of RTP1: 31 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.