

RTP3 (C-17): sc-100133

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. RTP3 [receptor (chemosensory) transporter protein 3], also known as LTM1, TMEM7, receptor-transporting protein 3 or transmembrane protein 7, is a 232 amino acid single-pass type III membrane protein belonging to the TMEM7 family. Unlike other RTP proteins, RTP3 is not expressed in olfactory neurons but is expressed predominantly in liver. RTP3 is involved in the functional expression of bitter taste receptors and suppresses cell proliferation, and is also found in human circumvallate papillae and testis (regions where bitter taste receptors are expressed). The gene encoding RTP3 maps to human chromosome 3p21.31 within C3CER1 (chromosome 3 common eliminated region 1), which is frequently eliminated in chromosomal deletions of solid tumors.

REFERENCES

1. Kiss, H., et al. 2002. The transcriptional map of the common eliminated region 1 (C3CER1) in 3p21.3. *Eur. J. Hum. Genet.* 10: 52-61.
2. Saito, H., et al. 2004. RTP family members induce functional expression of mammalian odorant receptors. *Cell* 119: 679-691.
3. Clark, A.J., et al. 2005. Inherited ACTH insensitivity illuminates the mechanisms of ACTH action. *Trends Endocrinol. Metab.* 16: 451-457.
4. Behrens, M., et al. 2006. Members of RTP and REEP gene families influence functional bitter taste receptor expression. *J. Biol. Chem.* 281: 20650-20659.
5. Zhou, X., et al. 2007. The interferon- α responsive gene TMEM7 suppresses cell proliferation and is downregulated in human hepatocellular carcinoma. *Cancer Genet. Cytogenet.* 177: 6-15.
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CHROMOSOMAL LOCATION

Genetic locus: RTP3 (human) mapping to 3p21.31.

SOURCE

RTP3 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of RTP3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-100133 P, (100 μ g 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

RTP3 (C-17) is recommended for detection of RTP3 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 family members RTP1, RTP2 or RTP4.

Suitable for use as control antibody for RTP3 siRNA (h): sc-78072, RTP3 shRNA Plasmid (h): sc-78072-SH and RTP3 shRNA (h) Lentiviral Particles: sc-78072-V.

Molecular Weight of RTP3: 27 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.