

# OR5M3 (C-13): sc-131707

## BACKGROUND

Olfactory receptors are G protein-coupled receptor proteins that localize to the cilia of olfactory sensory neurons where they display affinity for and bind to a variety of odor molecules. The genes encoding olfactory receptors comprise the largest family in the human genome. The binding of olfactory receptor proteins to odor molecules triggers a signal transduction cascade that leads to the production of cAMP via an olfactory-enriched adenylate cyclase. This event ultimately leads to transmission of action potentials to the brain and the subsequent perception of smell. Belonging to the G protein-coupled receptor 1 family, OR5M3 (olfactory receptor, family 5, subfamily M, member 3), also known as OR11-191, is a 307 amino acid multi-pass membrane protein that functions as an odorant receptor, effectively binding odor molecules and initiating the propagation of signals to the primary olfactory cortex.

## REFERENCES

1. Buck, L.B. 1993. Receptor diversity and spatial patterning in the mammalian olfactory system. *Ciba Found. Symp.* 179: 51-64.
2. Sullivan, S.L., et al. 1994. Odorant receptor diversity and patterned gene expression in the mammalian olfactory epithelium. *Prog. Clin. Biol. Res.* 390: 75-84.
3. Sullivan, S.L. and Dryer, L. 1996. Information processing in mammalian olfactory system. *J. Neurobiol.* 30: 20-36.
4. Touhara, K., et al. 1999. Functional identification and reconstitution of an odorant receptor in single olfactory neurons. *Proc. Natl. Acad. Sci. USA* 96: 4040-4045.
5. Kajiyama, K., et al. 2001. Molecular bases of odor discrimination: reconstitution of olfactory receptors that recognize overlapping sets of odorants. *J. Neurosci.* 21: 6018-6025.
6. Touhara, K. 2001. Functional cloning and reconstitution of vertebrate odorant receptors. *Life Sci.* 68: 2199-2206.
7. Touhara, K. 2002. Odor discrimination by G protein-coupled olfactory receptors. *Microsc. Res. Tech.* 58: 135-141.

## CHROMOSOMAL LOCATION

Genetic locus: OR5M3 (human) mapping to 11q12.1.

## SOURCE

OR5M3 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of OR5M3 of human origin.

## STORAGE

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

## PROTOCOLS

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

## 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-131707 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

OR5M3 (C-13) is recommended for detection of OR5M3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 OR5 family members.

Suitable for use as control antibody for OR5M3 siRNA (h): sc-96888, OR5M3 shRNA Plasmid (h): sc-96888-SH and OR5M3 shRNA (h) Lentiviral Particles: sc-96888-V.

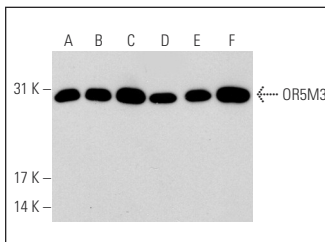
Molecular Weight of OR5M3: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, IMR-32 cell lysate: sc-2409 or A-431 whole cell lysate: sc-2201.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



OR5M3 (C-13): sc-131707. Western blot analysis of OR5M3 expression in A-431 (A), NTERA-2 cl.D1 (B), HeLa (C), U-937 (D), Jurkat (E) and IMR-32 (F) whole cell lysates.

## RESEARCH USE

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