

OR1D2 (C-12): sc-109364

BACKGROUND

Olfactory receptors interact with odorant molecules in the nose to initiate a neuronal response that leads to the perception of smell. While they share a seven transmembrane domain structure with many neurotransmitter and hormone receptors, olfactory receptors are responsible for the recognition and transduction of odorant signals. The olfactory receptor gene family is the largest in the genome. OR1D2 (olfactory receptor 1D2), also known as OR17-6 or OLFRR1, is a 312 amino acid multi-pass membrane protein that belongs to the G-protein coupled receptor 1 family. Aside from functioning as an odorant receptor, OR1D2 is involved in sperm chemotaxis. OR1D2 is expressed in olfactory epithelium and testis. The gene that encodes OR1D2 consists of nearly 1,000 bases and maps to human chromosome 17p13.3.

REFERENCES

1. Buck, L., et al. 1991. A novel multigene family may encode odorant receptors: a molecular basis for odor recognition. *Cell* 65: 175-187.
2. Online Mendelian Inheritance in Man, OMIM[™]. 1993. Johns Hopkins University, Baltimore, MD. MIM Number: 164342. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Ben-Arie, N., et al. 1994. Olfactory receptor gene cluster on human chromosome 17: possible duplication of an ancestral receptor repertoire. *Hum. Mol. Genet.* 3: 229-235.
4. Mombaerts, P. 1999. Molecular biology of odorant receptors in vertebrates. *Annu. Rev. Neurosci.* 22: 487-509.
5. Glusman, G., et al. 2000. Sequence, structure, and evolution of a complete human olfactory receptor gene cluster. *Genomics* 63: 227-245.
6. Spehr, M., et al. 2003. Identification of a testicular odorant receptor mediating human sperm chemotaxis. *Science* 299: 2054-2058.
7. Spehr, M., et al. 2004. Dual capacity of a human olfactory receptor. *Curr. Biol.* 14: R832-R833.
8. Malnic, B., et al. 2004. The human olfactory receptor gene family. *Proc. Natl. Acad. Sci. USA* 101: 2584-2589.

CHROMOSOMAL LOCATION

Genetic locus: OR1D2 (human) mapping to 17p13.3.

SOURCE

OR1D2 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of OR1D2 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 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-109364 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

OR1D2 (C-12) is recommended for detection of OR1D2 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 OR1 family members.

Suitable for use as control antibody for OR1D2 siRNA (h): sc-93893, OR1D2 shRNA Plasmid (h): sc-93893-SH and OR1D2 shRNA (h) Lentiviral Particles: sc-93893-V.

Molecular Weight of OR1D2: 35 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.