

# OR6X1 (Y-13): sc-131718

## BACKGROUND

Olfactory receptors are G protein-coupled receptors 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 that propagates nerve impulses throughout the body, ultimately leading to transmission of the signal to the brain and the subsequent perception of smell. OR6X1 (olfactory receptor, family 6, subfamily X, member 1), also known as OR11-270, is a 312 amino acid multi-pass membrane protein that functions as an odorant receptor and belongs to the G-protein coupled receptor 1 family. The gene encoding OR6X1 maps to human chromosome 11q24.1.

## REFERENCES

1. Ben-Arie, N., Lancet, D., Taylor, C., Khen, M., Walker, N., Ledbetter, D.H., Carrozzo, R., Patel, K., Sheer, D. and Lehrach, H. 1994. Olfactory receptor gene cluster on human chromosome 17: possible duplication of an ancestral receptor repertoire. *Hum. Mol. Genet.* 3: 229-235.
2. Sullivan, S.L., Ressler, K.J. and Buck, L.B. 1994. Odorant receptor diversity and patterned gene expression in the mammalian olfactory epithelium. *Prog. Clin. Biol. Res.* 390: 75-84.
3. Rouquier, S., Taviaux, S., Trask, B.J., Brand-Arpon, V., van den Engh, G., Demaille, J. and Giorgi, D. 1998. Distribution of olfactory receptor genes in the human genome. *Nat. Genet.* 18: 243-250.
4. Glusman, G., Sosinsky, A., Ben-Asher, E., Avidan, N., Sonkin, D., Bahar, A., Rosenthal, A., Clifton, S., Roe, B., Ferraz, C., Demaille, J. and Lancet, D. 2000. Sequence, structure, and evolution of a complete human olfactory receptor gene cluster. *Genomics* 63: 227-245.
5. Lane, R.P., Cutforth, T., Young, J., Athanasiou, M., Friedman, C., Rowen, L., Evans, G., Axel, R., Hood, L. and Trask, B.J. 2001. Genomic analysis of orthologous mouse and human olfactory receptor loci. *Proc. Natl. Acad. Sci. USA* 98: 7390-7395.
6. Gaillard, I., Rouquier, S. and Giorgi, D. 2004. Olfactory receptors. *Cell. Mol. Life Sci.* 61: 456-469.
7. Hatt, H. 2004. Molecular and cellular basis of human olfaction. *Chem. Biodivers.* 1: 1857-1869.
8. Malnic, B., Godfrey, P.A. and Buck, L.B. 2004. The human olfactory receptor gene family. *Proc. Natl. Acad. Sci. USA* 101: 2584-2589.
9. Kato, A. and Touhara, K. 2009. Mammalian olfactory receptors: pharmacology, G protein coupling and desensitization. *Cell. Mol. Life Sci.* 66: 3743-3753.

## CHROMOSOMAL LOCATION

Genetic locus: OR6X1 (human) mapping to 11q24.1.

## STORAGE

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

## SOURCE

OR6X1 (Y-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of OR6X1 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-131718 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

OR6X1 (Y-13) is recommended for detection of OR6X1 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 OR6 family members.

Suitable for use as control antibody for OR6X1 siRNA (h): sc-96931, OR6X1 shRNA Plasmid (h): sc-96931-SH and OR6X1 shRNA (h) Lentiviral Particles: sc-96931-V.

Molecular Weight of OR6X1: 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.

## PROTOCOLS

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