

# OR5W2 (N-12): sc-132017

## 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. OR5W2 (olfactory receptor 5W2), also known as OR5W3 or OR11-155, is a 310 amino acid multi-pass membrane protein that belongs to the G-protein coupled receptor 1 family. The gene that encodes OR5W2 consists of more than 900 bases and maps to human chromosome 11q11. Chromosome 11 houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that map to chromosome 11.

## REFERENCES

1. Fabiani, J.E., et al. 2000. Hereditary angioedema. Long-term follow-up of 88 patients. Experience of the Argentine Allergy and Immunology Institute. *Allergol. Immunopathol.* 28: 267-271.
2. Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. *Ann. Hum. Genet.* 67: 269-280.
3. Malnic, B., et al. 2004. The human olfactory receptor gene family. *Proc. Natl. Acad. Sci. USA* 101: 2584-2589.
4. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inherit. Metab. Dis.* 30: 654-663.
5. Siem, G., et al. 2008. Jervell and Lange-Nielsen syndrome in Norwegian children: aspects around cochlear implantation, hearing, and balance. *Ear Hear.* 29: 261-269.
6. Bhuiyan, Z.A., et al. 2008. An intronic mutation leading to incomplete skipping of exon-2 in KCNQ1 rescues hearing in Jervell and Lange-Nielsen syndrome. *Prog. Biophys. Mol. Biol.* 98 319-327.
7. Coldren, C.D., et al. 2009. Chromosomal microarray mapping suggests a role for BSX and Neurogranin in neurocognitive and behavioral defects in the 11q terminal deletion disorder (Jacobsen syndrome). *Neurogenetics* 10: 89-95.

## CHROMOSOMAL LOCATION

Genetic locus: OR5W2 (human) mapping to 11q11.

## SOURCE

OR5W2 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of OR5W2 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.

## 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-132017 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

OR5W2 (N-12) is recommended for detection of OR5W2 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 OR5W2 siRNA (h): sc-96978, OR5W2 shRNA Plasmid (h): sc-96978-SH and OR5W2 shRNA (h) Lentiviral Particles: sc-96978-V.

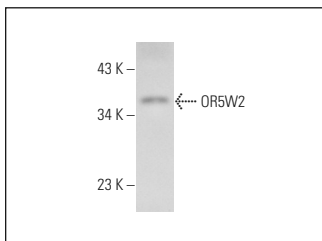
Molecular Weight of OR5W2: 35 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176.

## 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



OR5W2 (N-12): sc-132017. Western blot analysis of OR5W2 expression in U-251-MG whole cell lysate.

## 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.