

# OR56A4 (T-13): sc-133051

## 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. OR56A4 (olfactory receptor 56A4), also known as OR11-49, is a 313 amino acid multi-pass membrane protein that belongs to the G protein-coupled receptor 1 family. The gene that encodes OR56A4 consists of more than 900 bases and maps to human chromosome 11p15.4. 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

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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.
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## CHROMOSOMAL LOCATION

Genetic locus: OR56A4 (human) mapping to 11p15.4.

## SOURCE

OR56A4 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal extracellular domain of OR56A4 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-133051 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

OR56A4 (T-13) is recommended for detection of OR56A4 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); may cross-react with OR56A3.

OR56A4 (T-13) is also recommended for detection of OR56A4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for OR56A4 siRNA (h): sc-96530, OR56A4 shRNA Plasmid (h): sc-96530-SH and OR56A4 shRNA (h) Lentiviral Particles: sc-96530-V.

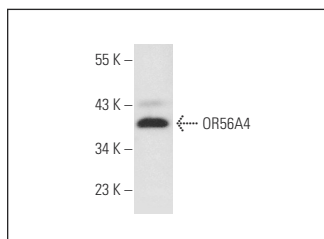
Molecular Weight of OR56A4: 35 kDa.

Positive Controls: NCI-H292 whole cell lysate: sc-364179.

## 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



OR56A4 (T-13): sc-133051. Western blot analysis of OR56A4 expression in NCI-H292 whole cell lysate.

## RESEARCH USE

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