

OR5K4 (E-11): sc-103098

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. OR5K4 (Olfactory receptor 5K4) is a 321 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. The gene encoding OR5K4 maps to human chromosome 3, which spans 200 million base pairs and encodes between 1,100 and 1,500 genes.

REFERENCES

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5. Kajiya, K., et al. 2001. Molecular bases of odor discrimination: Reconstitution of olfactory receptors that recognize overlapping sets of odorants. *J. Neurosci.* 21: 6018-6025.
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8. Malnic, B., et al. 2004. The human olfactory receptor gene family. *Proc. Natl. Acad. Sci. USA* 101: 2584-2589.
9. Keller, A., et al. 2008. Better smelling through genetics: mammalian odor perception. *Curr. Opin. Neurobiol.* 18: 364-369.

CHROMOSOMAL LOCATION

Genetic locus: OR5K4 (human) mapping to 3q11.2.

SOURCE

OR5K4 (E-11) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of OR5K4 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103098 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

OR5K4 (E-11) is recommended for detection of OR5K4 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 OR family members.

Suitable for use as control antibody for OR5K4 siRNA (h): sc-78508, OR5K4 shRNA Plasmid (h): sc-78508-SH and OR5K4 shRNA (h) Lentiviral Particles: sc-78508-V.

Molecular Weight of OR5K4: 37 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.