

OR4B1 (C-11): sc-376378

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. OR4B1 (Olfactory receptor 4B1), also known as Olfactory receptor OR11-106, is a 309 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.

REFERENCES

1. Buck, L.B. 1993. Receptor diversity and spatial patterning in the mammalian olfactory system. *Ciba Found. Symp.* 179: 51-64.
2. Sullivan, S.L., et al. 1994. Odorant receptor diversity and patterned gene expression in the mammalian olfactory epithelium. *Prog. Clin. Biol. Res.* 390: 75-84.
3. Sullivan, S.L. et al. 1996. Information processing in mammalian olfactory system. *J. Neurobiol.* 30: 20-36.
4. Touhara, K., et al. 1999. Functional identification and reconstitution of an odorant receptor in single olfactory neurons. *Proc. Natl. Acad. Sci. USA* 96: 4040-4045.

CHROMOSOMAL LOCATION

Genetic locus: OR4B1 (human) mapping to 11p11.2.

SOURCE

OR4B1 (C-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 287-319 within a C-terminal cytoplasmic domain of OR4B1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OR4B1 (C-11) is available conjugated to agarose (sc-376378 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376378 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376378 PE), fluorescein (sc-376378 FITC), Alexa Fluor® 488 (sc-376378 AF488), Alexa Fluor® 546 (sc-376378 AF546), Alexa Fluor® 594 (sc-376378 AF594) or Alexa Fluor® 647 (sc-376378 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376378 AF680) or Alexa Fluor® 790 (sc-376378 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376378 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

OR4B1 (C-11) is recommended for detection of OR4B1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for OR4B1 siRNA (h): sc-96844, OR4B1 shRNA Plasmid (h): sc-96844-SH and OR4B1 shRNA (h) Lentiviral Particles: sc-96844-V.

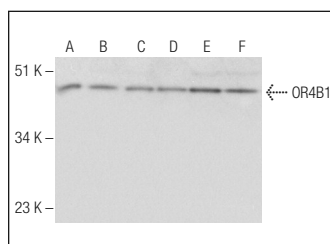
Molecular Weight of OR4B1: 34 kDa.

Positive Controls: A549 cell lysate: sc-2413, Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

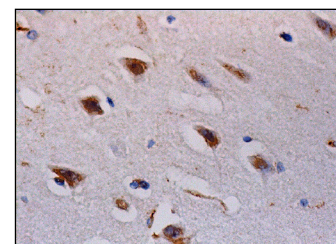
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



OR4B1 (C-11): sc-376378. Western blot analysis of OR4B1 expression in A549 (A), HeLa (B), Jurkat (C), A-431 (D), SK-N-SH (E) and IMR-32 (F) whole cell lysates.



OR4B1 (C-11): sc-376378. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells and glial cells.

STORAGE

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

RESEARCH USE

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