

OR51B4 (E-2): sc-515140

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. OR51B4 (olfactory receptor 51B4) is a 309 amino acid protein. The gene encoding OR51B4 maps to human chromosome 11.

REFERENCES

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2. Glusman, G., Bahar, A., Sharon, D., Pilpel, Y., White, J. and Lancet, D. 2000. The olfactory receptor gene superfamily: data mining, classification, and nomenclature. *Mamm. Genome* 11: 1016-1023.
3. Gaillard, I., Rouquier, S. and Giorgi, D. 2004. Olfactory receptors. *Cell. Mol. Life Sci.* 61: 456-469.
4. Buck, L.B. 2004. Olfactory receptors and odor coding in mammals. *Nutr. Rev.* 62: S184-S188.
5. Malnic, B., Godfrey, P.A. and Buck, L.B. 2004. The human olfactory receptor gene family. *Proc. Natl. Acad. Sci. USA* 101: 2584-2589.
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CHROMOSOMAL LOCATION

Genetic locus: OR51B4 (human) mapping to 11p15.4; Olfr66 (mouse) mapping to 7 E3.

SOURCE

OR51B4 (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 11-24 within an N-terminal extracellular domain of OR51B4 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515140 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

OR51B4 (E-2) is recommended for detection of OR51B4 of human origin, Olfr66 of mouse origin and Olr129 and Olr130 of rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for OR51B4 siRNA (h): sc-96724, Olfr66 siRNA (m): sc-151026, OR51B4 shRNA Plasmid (h): sc-96724-SH, Olfr66 shRNA Plasmid (m): sc-151026-SH, OR51B4 shRNA (h) Lentiviral Particles: sc-96724-V and Olfr66 shRNA (m) Lentiviral Particles: sc-151026-V.

Molecular Weight (predicted) of OR51B4: 35 kDa.

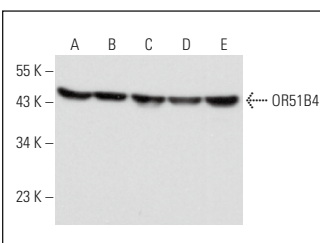
Molecular Weight (observed) of OR51B4: 42 kDa.

Positive Controls: ZR-75-1 cell lysate: sc-2241, K-562 whole cell lysate: sc-2203 or Caki-1 cell lysate: sc-2224.

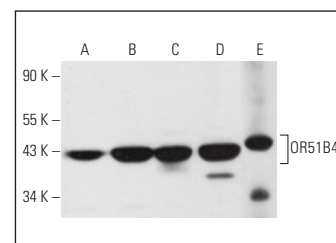
RECOMMENDED SUPPORT REAGENTS

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.

DATA



OR51B4 (E-2): sc-515140. Western blot analysis of OR51B4 expression in Y79 (A), ARPE-19 (B), BT-20 (C), K-562 (D) and TK-1 (E) whole cell lysates.



OR51B4 (E-2): sc-515140. Western blot analysis of OR51B4 expression in Y79 (A), ZR-75-1 (B), K-562 (C) and Caki-1 (D) whole cell lysates and human lymph node tissue extract (E).

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.