

# OBP-2B (K-12): sc-165151

## BACKGROUND

The Lipocalin protein family is a large group of small extracellular proteins that function as carriers for hydrophobic molecules in many biological fluids. In the oral sphere (nasal mucus, saliva, tears), Lipocalins have an environmental biosensor function and are involved in the detection of odors and pheromones. OBPs (odorant-binding proteins) are Lipocalins secreted by the olfactory epithelium in mammals and are found freely dissolved in the mucus layer protecting the olfactory neurons. OBPs may act as passive transporters of predominantly hydrophobic odorant molecules across the aqueous mucus layer, or they may play a more active role through recognition by the olfactory neuronal receptor. OBP-2B (odorant-binding protein 2b) is a 170 amino acid protein strongly expressed in genital sphere organs such as prostate and mammary glands.

## REFERENCES

1. Flower, D.R. 1994. The lipocalin protein family: a role in cell regulation. *FEBS Lett.* 354: 7-11.
2. Flower, D.R. 1996. The lipocalin protein family: structure and function. *Biochem. J.* 318: 1-14.
3. Pelosi, P. 1998. Odorant-binding proteins: structural aspects. *Ann. N.Y. Acad. Sci.* 855: 281-293.
4. Löbel, D., et al. 1998. Subtypes of odorant-binding proteins—heterologous expression and ligand binding. *Eur. J. Biochem.* 254: 318-324.
5. Tegoni, M., et al. 2000. Mammalian odorant binding proteins. *Biochim. Biophys. Acta* 1482: 229-240.
6. Lacazette, E., et al. 2000. A novel human odorant-binding protein gene family resulting from genomic duplicons at 9q34: differential expression in the oral and genital spheres. *Hum. Mol. Genet.* 9: 289-301.
7. Briand, L., et al. 2002. Evidence of an odorant-binding protein in the human olfactory mucus: location, structural characterization, and odorant-binding properties. *Biochemistry* 41: 7241-7252.
8. Hajjar, E., et al. 2006. Odorant binding and conformational dynamics in the odorant-binding protein. *J. Biol. Chem.* 281: 29929-29937.
9. Ko, H.J., et al. 2010. Specificity of odorant-binding proteins: a factor influencing the sensitivity of olfactory receptor-based biosensors. *Bioprocess Biosyst. Eng.* 33: 55-62.

## CHROMOSOMAL LOCATION

Genetic locus: OBP2B (human) mapping to 9q34.2.

## SOURCE

OBP-2B (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of OBP-2B 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-165151 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

OBP-2B (K-12) is recommended for detection of OBP-2B 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 OBP-2A.

Suitable for use as control antibody for OBP-2B siRNA (h): sc-92495, OBP-2B shRNA Plasmid (h): sc-92495-SH and OBP-2B shRNA (h) Lentiviral Particles: sc-92495-V.

Molecular Weight of OBP-2B isoforms 1/2/3: 19/18/9 kDa.

## 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) 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.

## 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.