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Product Information

Anti-OMP

produced in rabbit, affinity isolated antibody

Catalog Number **O7889**

Synonym: Anti-Olfactory Marker Protein

Product Description

Anti-OMP is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 119-137 located near the C-terminus of rat OMP (GeneID: 24612) conjugated to KLH. This sequence is identical in human and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-OMP recognizes rat and mouse OMP (~19 kDa) by immunoblotting. Staining of the OMP band is specifically inhibited by the immunizing peptide.

OMP is a phylogenetically conserved cytoplasmic protein of unknown function expressed almost exclusively in mature olfactory sensory neurons, in essentially all vertebrate species.^{1,2} OMP is expressed in both the olfactory neuroepithelium and the olfactory nerve projection to the olfactory bulb. Its expression is initially detected in rat and mouse embryo during the last trimester of gestation and reaches adult levels at ~2-4 weeks postnatally.³ OMP is synthesized in the perikaryon and transported both to the dendrite and along the axon to its termination in the glomerular layer of the olfactory bulb.⁴ Although it has a relatively long half-life and is axonally transported at a slow rate, its turnover and transport rates are faster in tissue of young animals and in regenerating tissue of adults than in normal adult olfactory epithelium.⁵ OMP-deficient mice generated by gene targeting in embryonic stem (ES) cells are compromised in their ability to respond to odor stimuli.⁶ In the OMP-null mouse, in addition to reduced odorant response, the levels of neural tyrosine hydroxylase (TH) and neuropeptide CCK are severely reduced. It has been suggested that OMP is a novel modulatory component of the odor detection signal transduction cascade that is developmentally and physiologically regulated.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~2 mg/ml

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5-1 µg/ml is recommended using rat brain (olfactory bulb) extract (S1 fraction).

Note: In order to obtain best results and assay sensitivity in different techniques and preparations we recommend determining optimal working concentrations by titration test.

References

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