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Anti-Opioid δ Receptor
produced in rabbit, whole antiserum

Catalog Number **O0382**

Product Description

Anti-Opioid δ Receptor (DOR, OP_1) is produced in rabbit by repeated immunization with a peptide corresponding to the carboxy-terminal of the opioid δ receptor covalently attached onto a carrier protein.

Anti-Opioid δ Receptor is specific for the COOH-terminal of the opioid δ receptor. The antibody specifically recognizes rat and mouse (predicted) opioid δ receptor by various immunochemical techniques including immunoblotting (~55 kDa) and immunocytochemistry.

Opioid peptides are endogenous neuromodulators that play a major role in the nociceptive pathway by interacting with several membrane receptors. Recent molecular cloning techniques have characterized the nucleotide sequence of at least three distinct opioid receptors, namely the δ-, κ- and μ-opioid receptors.[1] The cloned receptors are highly homologous (65%), differing only at the termini and the extracelluar loops that confer binding specificity.[2] All three interact with heterotrimeric G proteins.[3]

Enkephalin release and, thus, nociception are modulated by DORs located postsynaptically on pallidostriatal feedback neurons.[4] In contrast, DORs modulate nociception from a presynaptic localization in the periaqueductal gray (PAG) where immunolabeling of DOR was intracellular and often associated with large dense-core vesicles.[5] Additionally, receptor autoradiographic investigations localized DORs to the external plexiform layer of the olfactory bulb, the nucleus accumbens, several layers of the cerebral cortex and several nuclei of the amygdala.[6]

Reagent

Supplied as a lyophilized powder.

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.

Preparation Instructions

Resuspend the lyophilized powder in 100 μL of phosphate buffered saline containing 10 mg/mL BSA for the equivalent of whole antiserum, or with additional buffer for more dilute antiserum. Be careful to reconstitute the entire contents of the vial. Portions of the pellet may have dislodged during shipment and may not be in the bottom of the vial.

Storage/Stability

Store the lyophilized antibody at –20 °C. Upon reconstitution, store in working aliquots at –20 °C. Avoid repeated cycles of freezing and thawing.

Product Profile

Immunoblotting: a working dilution of 1:800 is recommended using whole rat brain homogenate.

Immunocytochemistry: a working dilution of 1:800 is recommended using cells in various regions of PLP fixed rat brain section known to express the opioid δ receptor using ABC techniques.

Antiserum Specificity

Polypeptide	% Cross Reactivity
δ Opioid Receptor (360-372)	100
δ Opioid Receptor	60
μ Opioid Receptor (391-398)	0
μ Opioid Receptor	0
κ Opioid Receptor (346-380)	0
κ Opioid Receptor	0

Note: In order to obtain the best results and assay sensitivities of various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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2. Reisine, T. and Bell, G.I., *Trends Neurosci.*, **16**, 506-510 (1993).

3. Childers, S.R., *Life Sci*., **48**, 1991-2003 (1991).
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5. Commons, K.G. et al., *J. Comp. Neurol*., **430**, 200-208 (2001).
6. Quock, R.M. et al., *Pharmacol. Rev*., **51**, 503-532 (1999).

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