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ProductInformation

ANTI-OPIOID μ RECEPTOR
Developed in Rabbit, Whole Antiserum

Product Number **O 0507**

Product Description

Anti-Opioid μ Receptor (MOR, OP_3) is developed in rabbit by repeated immunization with a synthetic peptide corresponding to amino acids 384-398 of the rat opioid μ receptor.

Anti-Opioid μ Receptor specifically recognizes the rat opioid μ receptor (44-45 kDa) by immunoblotting, immunoprecipitation and immunohistochemistry or immunofluorescence on frozen tissue sections from the rat caudate putamen and the dorsal horn of the spinal cord.

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]

Of the three opioid receptors, the MOR shows the highest affinity for morphine. Activation of MORs inhibits γ-amino butyric acid (GABA)-containing interneurons resulting in a net excitatory effect in the hippocampus.[4] Localization of MORs is both pre- and post-synaptic and almost exclusively in GABAergic interneurons. MORs are widely distributed in regions throughout the brain and spinal cord including laminae I and II of the medullary and spinal dorsal horns, the striatum, optic tract and locus coerelius.[5]

Reagent

Anti-Opioid μ Receptor is supplied as 100 μl of lyophilized rabbit polyclonal antiserum.

Preparation Instructions

Resuspend the lyophilized antibody in 100 μl sterile distilled water. 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. Dilute with sterile PBS or Tris buffer at dilutions no higher than 1:10. After reconstitution, this product is stable for six months at –20 °C.

Product Profile

The specificity of the Anti-Opioid μ Receptor was determined by immunolabeling of transfected cells, immunoblotting and immunoisolation studies.[6] The suggested working dilution for frozen sections is 1:1000-1:2000 for ABC or PAP detection and 1:100-1:200 for immunofluorescent detection. The recommended working dilution for immunoblotting is 1:2000-1:2500.

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

References

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4. Drake, C.T. and Milner, T.A., Brain Res., **849**, 203-215 (1999).
5. Ding, Y.Q. et al., J. Comp. Neurol., **367**, 375-402 (1996).
6. Dado, R.J. et al., Neuroreport, **5**, 341-344 (1993)