**Rat µ Opioid R/OPRM1 Antibody**

Monoclonal Mouse IgG2A Clone # 677014

Catalog Number: MAB6866

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**DESCRIPTION**

**Species Reactivity**  
Rat

**Specificity**  
Detects rat µ Opioid R/OPRM1 in direct ELISAs.

**Source**  
Monoclonal Mouse IgG2A Clone # 677014

**Purification**  
Protein A or G purified from hybridoma culture supernatant

**Immunogen**  
Synthetic peptide corresponding to His385-Pro398 of rat µ Opioid R/OPRM1  
Accession #: P33535

**Formulation**  
Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.  
*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recommended Concentration</th>
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<tbody>
<tr>
<td>Western Blot</td>
<td>1 µg/mL</td>
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See Below

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**DATA**

**Western Blot**

Detection of Rat µ Opioid R/OPRM1 by Western Blot.  
Western blot shows lysates of rat brain tissue. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human µ Opioid R/OPRM1 Monoclonal Antibody (Catalog # MAB6866) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for µ Opioid R/OPRM1 at approximately 63 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

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**PREPARATION AND STORAGE**

**Reconstitution**  
Sterile PBS to a final concentration of 0.5 mg/mL.

**Shipping**  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.  
*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.

**Stability & Storage**  
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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**BACKGROUND**

The µ-type opioid receptor (MOR), also known as OPRM1, is a 60-70 kDa variably glycosylated G protein-coupled receptor that mediates the biological effects of many alkaloid and peptide opioids including morphine. MOR is primarily expressed on neurons in the brain, spinal cord, and gastrointestinal tract as well as on immune cells. MOR activation induces analgesia, euphoria, sedation, respiratory depression, and reduced intestinal motility. Following agonist binding, MOR is phosphorylated and internalized which contributes to opioid tolerance and desensitization. OPRM1 can form heterdimers with several other 7TM GPCRs including the delta-type Opioid Receptor (DOR), Nociceptin/Orphanin Receptor (ORL1), Neurokinin 1 Receptor (NK1), Somatostatin Receptor 2 (SSTR2), Cannabinoid Receptor 1, CCR5, and the α2A-Adrenergic Receptor (ADRA2A). Rat MOR shares 94% and 98% aa sequence identity with human and mouse MOR, respectively.

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