

## DESCRIPTION

<b>Species Reactivity</b>	Rat
<b>Specificity</b>	Detects rat $\mu$ Opioid R/OPRM1 in direct ELISAs.
<b>Source</b>	Recombinant Monoclonal Rabbit IgG Clone # 1126B
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	Synthetic peptide with a short amino acid sequence from the N-terminus of rat $\mu$ Opioid R/OPRM1 Accession # P33535
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m 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 $\mu$ m filtered solution in PBS.

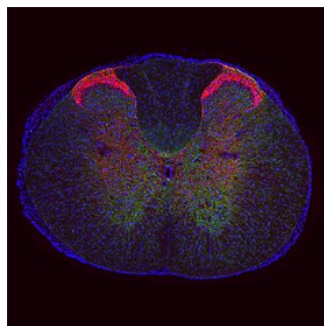
## APPLICATIONS

**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.

	Recommended Concentration	Sample
<b>Immunohistochemistry</b>	1-25 $\mu$ g/mL	See Below

## DATA

### Immunohistochemistry



#### $\mu$ Opioid R/OPRM1 in Rat Spinal Cord.

$\mu$  Opioid R/OPRM1 was detected in perfusion fixed frozen sections of rat spinal cord using Rabbit Anti-Rat  $\mu$  Opioid R/OPRM1 Monoclonal Antibody (Catalog # MAB8629) at 1  $\mu$ g/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to dorsal horn. View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

The mu-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 heterodimers 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  $\alpha$ 2-Adrenergic Receptor (ADRA2A). Rat MOR shares 94% and 98% aa sequence identity with human and mouse MOR, respectively.