

# Product Datasheet

## mu Opioid R/OPRM1 Antibody

### NBP1-31180

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NBP1-31180****mu Opioid R/OPRM1 Antibody**

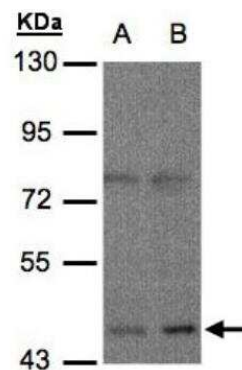
Product Information	
<b>Unit Size</b>	0.1 ml
<b>Concentration</b>	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Polyclonal
<b>Preservative</b>	0.01% Thimerosal
<b>Isotype</b>	IgG
<b>Purity</b>	Antigen Affinity-purified
<b>Buffer</b>	PBS, 1% BSA, 20% Glycerol
<b>Target Molecular Weight</b>	45 kDa

Product Description	
<b>Host</b>	Rabbit
<b>Gene ID</b>	4988
<b>Gene Symbol</b>	OPRM1
<b>Species</b>	Human
<b>Reactivity Notes</b>	Immunogen displays the following percentage of sequence identity for non-tested species: Pig (86%), Chimpanzee (86%), Bovine (86%).
<b>Immunogen</b>	Carrier-protein conjugated synthetic peptide encompassing a sequence within the N-terminus region of human mu Opioid R/OPRM1. The exact sequence is proprietary.

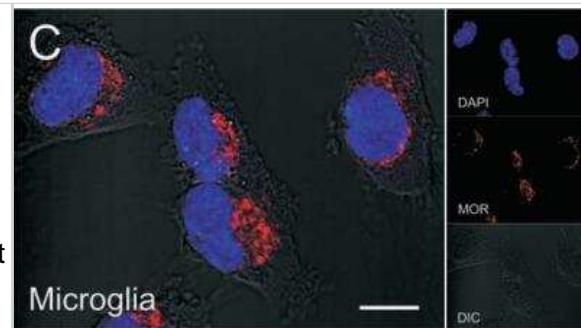
Product Application Details	
<b>Applications</b>	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin
<b>Recommended Dilutions</b>	Western Blot 1:500-1:3000, Flow Cytometry Reported in scientific literature (PMID: 23751259)., Immunohistochemistry 1:100-1:1000, Immunocytochemistry/ Immunofluorescence Reported in scientific literature (PMID: 22591368)., Immunohistochemistry-Paraffin 1:100-1:1000

**Images**

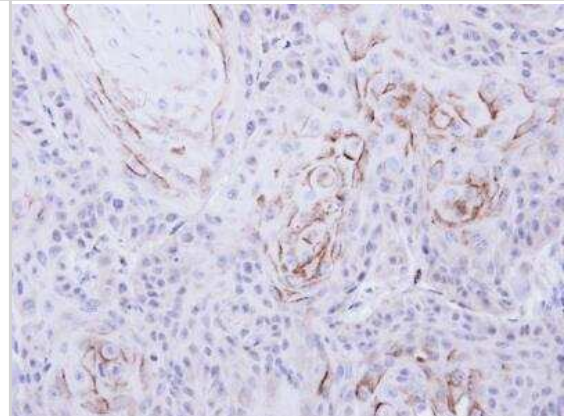
Western Blot: mu Opioid R/OPRM1 Antibody [NBP1-31180] - Sample(30 ug of whole cell lysate) A:A431 B:H1299 7.5% SDS PAGE, antibody diluted at 1:500.



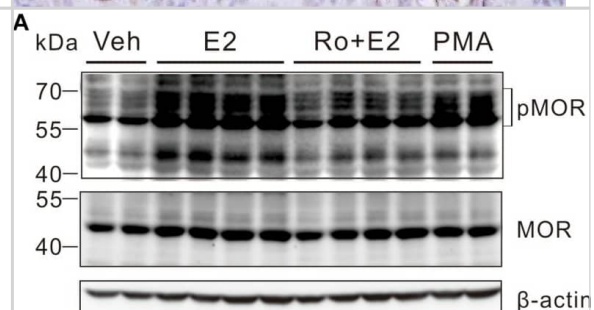
Immunocytochemistry/Immunofluorescence: mu Opioid R/OPRM1 Antibody [NBP1-31180] - MOR immunofluorescence in human astrocytes and microglia. MOR and GFAP co-localization in subsets of primary human astrocytes (C) immunofluorescence in subpopulations of primary human microglia (ScienCell; catalog number 1900-f1) cultured as described for astrocytes. Cells were fixed with 3.7% paraformaldehyde, permeabilized with 0.5% Triton X-100, immunolabeled, nuclei were stained with DAPI (blue). Primary antibodies used at a 1:200 dilution. Images were acquired using a Zeiss LSM 700 laser scanning confocal microscope at 63x (1.42 NA) magnification and ZEN 2010 software (Carl Zeiss Inc, Thornwood, NY), and edited using ZEN 2009 Light Edition (Zeiss) and Adobe Photoshop CS3 Extended 10.0 software (Adobe Systems, Inc.). Image collected and cropped by CiteAb from the following publication ([pubmed.ncbi.nlm.nih.gov/22591368/](https://pubmed.ncbi.nlm.nih.gov/22591368/)), licensed under a CC-BY license.



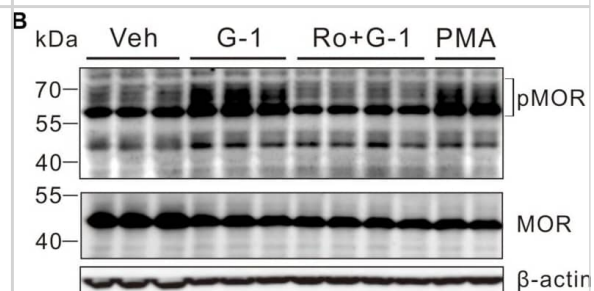
Immunohistochemistry-Paraffin: mu Opioid R/OPRM1 Antibody [NBP1-31180] - Cal27 xenograft, using mu Opioid receptor antibody at 1:500 dilution. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min.



Western Blot: mu Opioid R/OPRM1 Antibody [NBP1-31180] - E2 & G-1 stimulate phosphorylation of MOR in a PKC-dependent manner. (A,B) SH-SY5Y cells treated with PMA (1  $\mu$ M), E2 (1  $\mu$ M), or G-1 (1  $\mu$ M) for 30 min showed increased level of phosphorylated MOR (pMOR) as compared with the vehicle group. In the presence of the pan-PKC inhibitor (Ro 31-8820, Ro, 3  $\mu$ M), E2 & G-1 failed to increase pMOR expression. (C) The averaged pMOR level (relative to  $\beta$ -actin) in cells with different treatments. After detection of pMOR (A,B), the nitrocellulose membrane was stripped & re-blocked by 5% fat-free dry milk in TBST, followed by incubation with MOR primary antibody, then MOR band was detected.  $\square\square P < 0.01$ ,  $\square\square\square P < 0.001$ , one-way ANOVA with Tukey's post hoc test, averaged data from three to four independent experiments. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31920512/>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: mu Opioid R/OPRM1 Antibody [NBP1-31180] - E2 & G-1 stimulate phosphorylation of MOR in a PKC-dependent manner. (A,B) SH-SY5Y cells treated with PMA (1  $\mu$ M), E2 (1  $\mu$ M), or G-1 (1  $\mu$ M) for 30 min showed increased level of phosphorylated MOR (pMOR) as compared with the vehicle group. In the presence of the pan-PKC inhibitor (Ro 31-8820, Ro, 3  $\mu$ M), E2 & G-1 failed to increase pMOR expression. (C) The averaged pMOR level (relative to  $\beta$ -actin) in cells with different treatments. After detection of pMOR (A,B), the nitrocellulose membrane was stripped & re-blocked by 5% fat-free dry milk in TBST, followed by incubation with MOR primary antibody, then MOR band was detected.  $\square\square P < 0.01$ ,  $\square\square\square P < 0.001$ , one-way ANOVA with Tukey's post hoc test, averaged data from three to four independent experiments. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31920512/>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Gao T, Dong L, Qian J et al. Gper in the Rostral Ventromedial Medulla is Essential for Mobilizing Descending Inhibition of Itch SSRN Journal 2020-09-25 [PMID: 34349001]

Ding X, Gao T, Gao P et al. Activation of the G Protein-Coupled Estrogen Receptor Elicits Store Calcium Release and Phosphorylation of the Mu-Opioid Receptors in the Human Neuroblastoma SH-SY5Y Cells Front Neurosci 2019-12-17 [PMID: 31920512] (ICC/IF, WB, Human)

EI-Hage Nazira, Dever Seth M, Podhaizer Elizabeth M et al. A novel bivalent HIV-1 entry inhibitor reveals fundamental differences in CCR5-u-opioid receptor interactions between human astroglia and microglia. Aids (London, England) 2013-01-01 [PMID: 23751259] (FLOW, Human)

Dever SM, Xu R, Fitting S et al. Differential expression and HIV-1 regulation of mu-opioid receptor splice variants across human central nervous system cell types. J Neurovirol 2012-06-01 [PMID: 22528479]

Hauser KF, Fitting S, Dever SM et al. Opiate Drug Use and the Pathophysiology of NeuroAIDS Curr HIV Res 2012-07-01 [PMID: 22591368] (ICC/IF, Human)





### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-  
techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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