

Rabbit OPRM1 Polyclonal Antibody | anti-OPRM1 antibody

OPRM1 Antibody (Center)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA287290	Rabbit	Human, mouse (Predicted Reactivity: Monkey, Pig, Rat)	Flow Cytometry, Functional Assay, Immunohistochemistry, ELISA, Western Blot

PRODUCT SYNONYMS

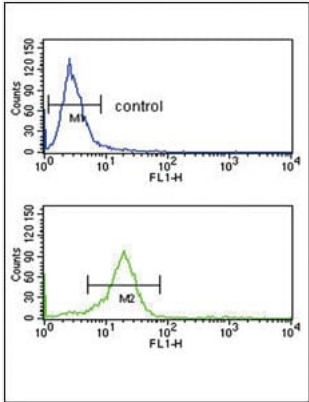
OPRM1; Polyclonal Antibody; OPRM1 Antibody (Center); Mu-type opioid receptor; M-OR-1; MOR-1; Mu opiate receptor; Mu opioid receptor; MOP; hMOP; MOR1; anti-OPRM1 antibody

PRODUCT SPECIFICATIONS

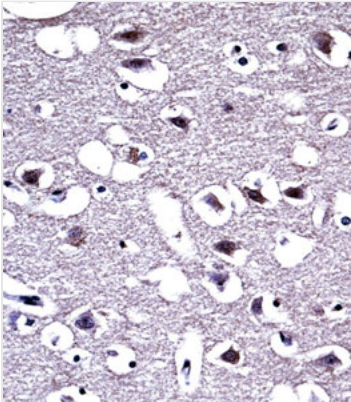
Host	Rabbit
Reactivity	Human, mouse (Predicted Reactivity: Monkey, Pig, Rat)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This OPRM1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 161-187 amino acids from the Central region of human OPRM1.
Purity/Purification	Peptide Affinity Purified Rabbit Polyclonal Antibody (Pab)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Sequence Positions	161-187
Sequence Length	186
Applicable Applications for anti-OPRM1 antibody	FCM/FACS (Flow Cytometry), IHC (Immunohistochemistry), ELISA, WB (Western Blot)
Calculated MW	44779

Function	Receptor for endogenous opioids such as beta-endorphin and endomorphin. Receptor for natural and synthetic opioids including morphine, heroin, DAMGO, fentanyl, etorphine, buprenorphin and methadone. Agonist binding to the receptor induces coupling to an inactive GDP-bound heterotrimeric G-protein complex and subsequent exchange of GDP for GTP in the G-protein alpha subunit leading to dissociation of the G-protein complex with the free GTP-bound G-protein alpha and the G-protein beta- gamma dimer activating downstream cellular effectors. The agonist- and cell type-specific activity is predominantly coupled to pertussis toxin-sensitive G(i) and G(o) G alpha proteins, GNAI1, GNAI2, GNAI3 and GNAO1 isoforms Alpha-1 and Alpha-2, and to a lesser extent to pertussis toxin-insensitive G alpha proteins GNAZ and GNA15. They mediate an array of downstream cellular responses, including inhibition of adenylate cyclase activity and both N-type and L-type calcium channels, activation of inward rectifying potassium channels, mitogen-activated protein kinase (MAPK), phospholipase C (PLC), phosphoinositide/protein kinase (PKC), phosphoinositide 3-kinase (PI3K) and regulation of NF-kappa-B. Also couples to adenylate cyclase stimulatory G alpha proteins. The selective temporal coupling to G-proteins and subsequent signaling can be regulated by RGSZ proteins, such as RGS9, RGS17 and RGS4. Phosphorylation by members of the GPRK subfamily of Ser/Thr protein kinases and association with beta-arrestins is involved in short-term receptor desensitization. Beta-arrestins associate with the GPRK-phosphorylated receptor and uncouple it from the G-protein thus terminating signal transduction. The phosphorylated receptor is internalized through endocytosis via clathrin-coated pits which involves beta-arrestins. The activation of the ERK pathway occurs either in a G-protein-dependent or a beta-arrestin-dependent manner and is regulated by agonist- specific receptor phosphorylation. Acts as a class A G-protein coupled receptor (GPCR) which dissociates from beta-arrestin at or near the plasma membrane and undergoes rapid recycling. Receptor down-regulation pathways are varying with the agonist and occur dependent or independent of G-protein coupling. Endogenous ligands induce rapid desensitization, endocytosis and recycling whereas morphine induces only low desensitization and endocytosis. Heterooligomerization with other GPCRs can modulate agonist binding, signaling and trafficking properties. Involved in neurogenesis. Isoform 12 couples to GNAS and is proposed to be involved in excitatory effects. Isoform 16 and isoform 17 do not bind agonists but may act through oligomerization with binding- competent OPRM1 isoforms and reduce their ligand binding activity.
Cellular location	Cell membrane; Multi-pass membrane protein
Tissue Location	Expressed in brain. Isoform 16 and isoform 17 are detected in brain.
Preparation and Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

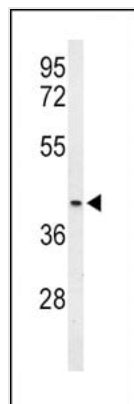
IMAGES



FCM/FACS (Flow Cytometry)
OPRM1 Antibody (Center) flow cytometry analysis of K562 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



IHC (Immunohiostchemistry)
OPRM1 Antibody (Center) (AAA287290)immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of OPRM1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



WB (Western Blot)
Western blot analysis of OPRM1 Antibody (Center) in mouse heart tissue lysates (35ug/lane).
OPRM1 (arrow) was detected using the purified Pab.

ADDITIONAL INFORMATION

Related Product Information for anti-OPRM1 antibody	OPRM1 is the mu opioid receptor, which is the primary site of action for the most commonly used opioids, including morphine, heroin, fentanyl, and methadone. It is also the primary receptor for endogenous opioid peptides beta-endorphin (see POMC, MIM 176830) and the enkephalins (see PENK, MIM 131330). The OPRM1 receptor is a membrane of the G protein-coupled receptor family (Bond et al., 1998 [PubMed 9689128]). There are at least 3 types of opioid receptors, mu, kappa (OPRK1; MIM 165196), and delta, each with a distinct pharmacologic profile.
Product Categories/Family for anti-OPRM1 antibody	Cell Biology; Neuroscience; Phospho Antibodies
References	Bare,L.A., et.al., FEBS Lett. 354 (2), 213-216 (1994) Wang,J.B., et.al., FEBS Lett. 338 (2), 217-222 (1994)

NCBI AND UNIPROT INFORMATION

NCBI GI #	117940060
NCBI GeneID	4988
NCBI Accession #	NP_000905.3; NP_001008503.2; NP_001008504.2; NP_001008505.2; NP_001138751.1; NP_001138752.1; NP_001138753.1; NP_001138754.1; NP_001138755.1; NP_001138756.1; NP_001138757.1; NP_001138758.1; NP_001138759.1
NCBI GenBank Nucleotide #	NM_000914.4
UniProt Accession #	P35372; Q12930; Q4VWM1; Q4VWM2; B0FXJ1; B2R9S7; B8Q1L7; B8Q1L8; B8Q1L9; E7EWZ3; G8XRH6; G8XRH8
Molecular Weight	44779
NCBI Official Full Name	mu-type opioid receptor isoform MOR-1
NCBI Official Synonym Full Names	opioid receptor, mu 1
NCBI Official Symbol	OPRM1
NCBI Official Synonym Symbols	MOP; MOR; LMOR; MOR1; OPRM; M-OR-1
NCBI Protein Information	mu-type opioid receptor
UniProt Protein Name	Mu-type opioid receptor
UniProt Gene Name	OPRM1
UniProt Synonym Gene Names	MOR1; M-OR-1; MOR-1; MOP; hMOP
UniProt Entry Name	OPRM_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/oprm1-antibody-flow-cytometry-immunohistochemistry-western-blot-elisa/287290>