

Rabbit anti-Human, Mouse OPRM1 Polyclonal Antibody | anti-OPRM1 antibody

OPRM1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA325649	Rabbit	Human, Mouse	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

OPRM1; Polyclonal Antibody; OPRM1 Antibody; hMOP; LMOR; M-OR-1; MOP; MOR; MOR-1; MOR1; Mu opiate receptor; Mu opioid receptor; Mu-type opioid receptor; Opioid receptor mu 1; OPRM; OPRM_HUMAN; anti-OPRM1 antibody

PRODUCT SPECIFICATIONS

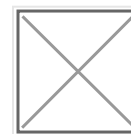
Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	IgG
Specificity	OPRM1 antibody detects endogenous levels of total OPRM1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	400
Applicable Applications for anti-OPRM1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide
Subcellular Location	Cell Membrane
Tissue Specificity	Expressed in brain. Isoform 16 and isoform 17 are detected in brain.
Predicted Cross Reactivity	Pig, Bovine, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (90%), Bovine (90%), Sheep (90%), Rabbit (90%), Dog (90%), Chicken (80%), Xenopus (80%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)

Western blot analysis of extracts from HeLa cells, using OPRM1 antibody.



IF (Immunofluorescence)

AAA325649 staining HeLa cells by ICC/IF. Cells were fixed with PFA and permeabilized in 0.1% saponin prior to blocking in 10% serum for 45 minutes at 37 degree C. The primary antibody was diluted 1/200 and incubated with the sample for 1 hour at 37 degree C. A Alexa Fluor 594 conjugated goat polyclonal to rabbit IgG (H+L), diluted 1/600 was used as secondary antibody.



IHC (Immunohistochemistry)

AAA325649 at 1/100 staining Human brain cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-OPRM1 antibody

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 (PubMed:7905839, PubMed:7957926, PubMed:7891175, PubMed:12589820, PubMed:9689128). 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 (PubMed:7905839). 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 (PubMed:12068084). 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 (PubMed:20525224). 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 (PubMed:16580639). Subunit Structure: Forms homooligomers and heterooligomers with other GPCRs, such as OPRD1, OPRK1, OPRL1, NPFFR2, ADRA2A, SSTR2, CNR1 and CCR5 (probably in dimeric forms) (PubMed:12413885, PubMed:15778451, PubMed:15967873, PubMed:17224450). Interacts with heterotrimeric G proteins; interaction with a heterotrimeric complex containing GNAI1, GNB1 and GNG2 stabilizes the active conformation of the receptor and increases its affinity for endomorphin-2, the synthetic opioid peptide DAMGO and for morphinan agonists (By similarity). Interacts with PPL; the interaction disrupts agonist-mediated G-protein activation (PubMed:12810704). Interacts (via C-terminus) with DNAJB4 (via C-terminus) (PubMed:16542645). Interacts with calmodulin; the interaction inhibits the constitutive activity of OPRM1; it abolishes basal and attenuates agonist-stimulated G-protein coupling (PubMed:10419536, PubMed:10899953). Interacts with FLNA, PLD2, RANBP9 and WLS and GPM6A (PubMed:12519790, PubMed:14573758, PubMed:19788913, PubMed:20214800). Interacts with RTP4 (By similarity). Interacts with SYP and GNAS (By similarity). Interacts with RGS9, RGS17, RGS20, RGS4, PPP1R9B and HINT1 (By similarity). Post-translational Modifications: Phosphorylated. Differentially phosphorylated in basal and agonist-induced conditions. Agonist-mediated phosphorylation modulates receptor internalization. Phosphorylated by GRK2 in a agonist-dependent manner. Phosphorylation at Tyr-168 requires receptor activation, is dependent on non-receptor protein tyrosine kinase Src and results in a decrease in agonist efficacy by reducing G-protein coupling efficiency. Phosphorylated on tyrosine residues; the phosphorylation is involved in agonist-induced G-protein-independent receptor down-regulation. Phosphorylation at Ser-377 is involved in G-protein-dependent but not beta-arrestin-dependent activation of the ERK pathway (By similarity). Ubiquitinated. A basal ubiquitination seems not to be related to degradation. Ubiquitination is increased upon formation of OPRM1:OPRD1 oligomers leading to proteasomal degradation; the ubiquitination is diminished by RTP4. Similarity: Belongs to the G-protein coupled receptor 1 family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	117940060
NCBI GeneID	4988
NCBI Accession #	NP_000905.3
NCBI GenBank Nucleotide #	NM_000914.4
UniProt Accession #	P35372; Q12930; Q4VWM1; Q4VWM2; B0FXJ1; B2R9S7; B8Q1L7; B8Q1L8; B8Q1L9; E7EWZ3; G8XRH6; G8XRH8
Molecular Weight	Observed: 48 kD Predicted: 45 kDa
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

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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/oprm1-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/325649>