



Rabbit Anti-Phospho-mu Opioid Receptor (Ser377) antibody

SL10532R

Product Name:	Phospho-mu Opioid Receptor (Ser377)
Chinese Name:	磷酸化 μ -型阿片受体抗体
Alias:	Mu Opioid Receptor (phospho S377)(human); Mu Opioid Receptor (phospho S375)(mo, rat); Phospho-mu Opioid Receptor (Ser375)(mo, rat); LMOR; MOR 1; mor; MOR1; Mu opiate receptor; mu type opioid receptor; Mu type opioid receptor MOR 1; muOR; Opioid receptor mu 1; Opioid receptor mu; OPRM; OPRM1; OPRM_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	44kDa
Cellular localization:	The cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthesised phosphopeptide derived from human mu Opioid Receptor around the phosphorylation site of Ser377:HP(p-S)TA
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	This gene encodes one of three opioid receptors. The mu opioid receptor is the principal

target of endogenous opioid peptides and opioid analgesic agents such as beta-endorphin and enkephalins. The NM_001008503.1:c.118A>G allele had been associated with opioid and alcohol addiction and variations in pain sensitivity but evidence is conflicting. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jun 2012]

Function:

Receptor for endogenous opioids such as beta-endorphin and endomorphin. 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. Heterooligomerization with other GPCRs can modulate agonist binding, signaling and trafficking properties. Involved in neurogenesis.

Subunit:

Forms homooligomers and heterooligomers with other GPCRs, such as OPRD1, OPRK1, OPRL1, NPFFR2, ADRA2A, SSTR2, CNR1 and CCR5 (probably in dimeric forms). Interacts with PPL; the interaction disrupts agonist-mediated G-protein activation. Interacts (via C-terminus) with DNAJB4 (via C-terminus). Interacts with calmodulin; the interaction inhibits the constitutive activity of OPRM1; it abolishes basal and attenuates agonist-stimulated G-protein coupling. Interacts with FLNA. Interacts with PLD2. Interacts with RANBP9 and WLS. Interacts with GPM6A. Interacts with RTP4. Interacts with SYP and GNAS. Interacts with RGS9, RGS17 and

RGS20. Interacts with RGS4. Interacts with PPP1R9B and HINT1.

Subcellular Location:

Cell membrane; Multi-pass membrane protein.

Tissue Specificity:

Brain. Is expressed in the cerebral cortex, caudate putamen, nucleus accumbens, septal nuclei, thalamus, hippocampus, and habenula. Not detected in cerebellum.

Similarity:

Belongs to the G-protein coupled receptor 1 family.

SWISS:

P35372

Gene ID:

4988

Database links:

[Entrez Gene: 4988](#) Human

[Entrez Gene: 281958](#) Cow

[Entrez Gene: 18390](#) Mouse

[Entrez Gene: 25601](#) Rat

[Omim: 600018](#) Human

[SwissProt: P79350](#) Cow

[SwissProt: P35372](#) Human

[SwissProt: P42866](#) Mouse

[SwissProt: Q95247](#) Pig

[SwissProt: P33535](#) Rat

[Unigene: 2353](#) Human

[Unigene: 457998](#) Mouse

[Unigene: 10118](#) Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

www.sunlongbiotech.com