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Rabbit Anti-mu Opioid receptor antibody

SL3623R

Product Name:	mu Opioid receptor
Chinese Name:	μ-型阿片受体抗体
Alias:	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.
文献引用 PubMed :	**Specific References(2)**|SL3623R has been referenced in 2 publications. **[IF=3.36]**Laureano, D. P., et al. "Intrauterine growth restriction modifies the hedonic response to sweet taste in newborn pups-role of the accumbal μ-opioid receptors." Neuroscience (2016).**WB;Rat**. PubMed:26926962 **[IF=2.33]**Wu, Jian, Peng Li, and Xiuying Wu. "The effect of chronic intermittent hypoxia on respiratory sensitivity to morphine in rats." Sleep and Breathing (2017): 1-7.**WB;Rat**. PubMed:28050773
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Rabbit,Guinea Pig,
Applications:	WB=1:500-2000IHC-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:	45kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml

immunogen:	KLH conjugated synthetic peptide derived from human mu Opioid receptor:165-270/400
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 a s beta-endorphn 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 extend 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.
Isoform 12: Cytoplasm.

Tissue Specificity:
Expressed in brain. Isoform 16 and isoform 17 are detected in brain.

Post-translational modifications:
Phosphorylated. Differentially phosphorylated in basal and agonist-induced conditions. Agonist-mediated phosphorylation modulates receptor internalization. Phosphorylated by ADRBK1 in a agonist-dependent manner. Phosphorylation at Tyr-166 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 agoinist-induced G-protein-indepenedent receptor down-regulation. Phosphorylation at Ser-375 is involved in G-protein-dependent but not beta-arrestin-dependent activation of the ERK pathway.
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. 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 agoinist-induced G-protein-indepenedent 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 (By similarity).

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

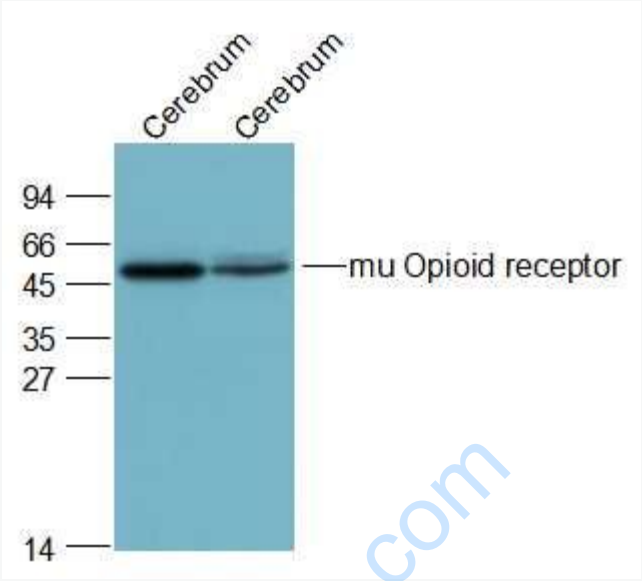
SwissProt: P33535 Rat

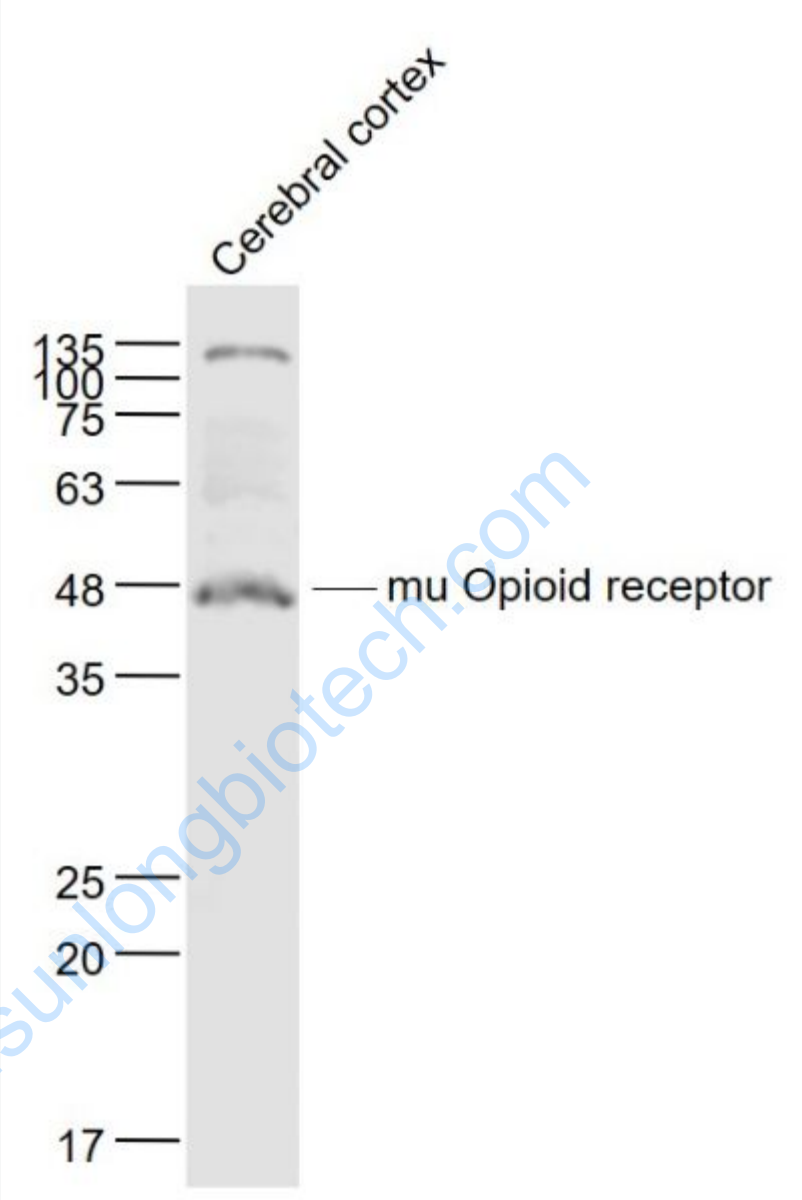
Unigene: 2353 Human

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.

Picture:	 Sample: Cerebrum (Mouse) Lysate at 40 ug Cerebrum (Rat) Lysate at 40 ug Primary: Anti-mu Opioid receptor (SL3623R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 45 kD Observed band size: 47 kD



Sample:

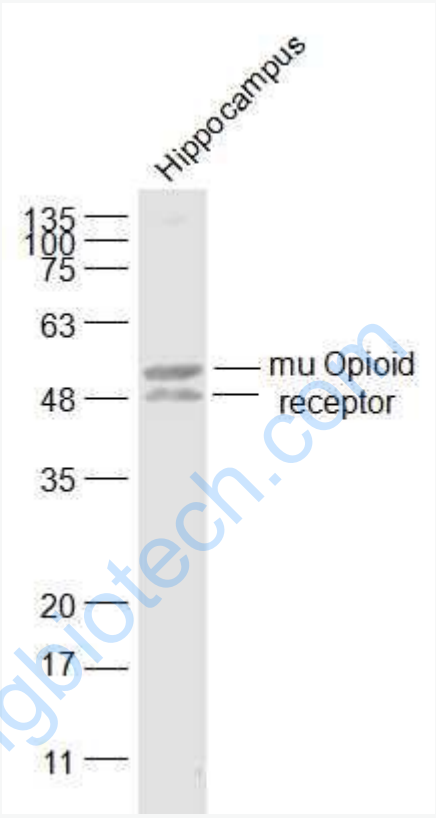
Cerebral cortex (Mouse) Lysate at 40 ug

Primary: Anti- mu Opioid receptor (SL3623R) at 1/500 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 45 kD

Observed band size: 47 kD



Sample:

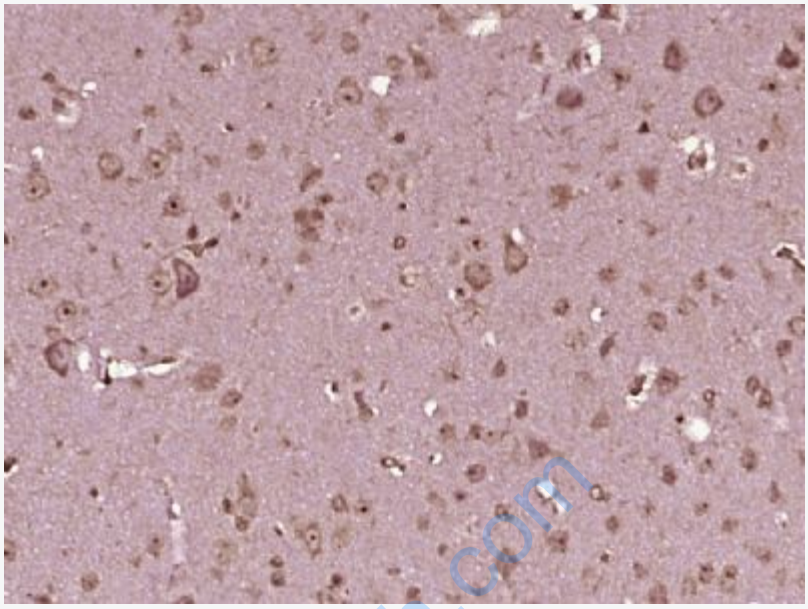
Hippocampus (Mouse) Lysate at 40 ug

Primary: Anti-mu Opioid receptor (SL3623R) at 1/500 dilution

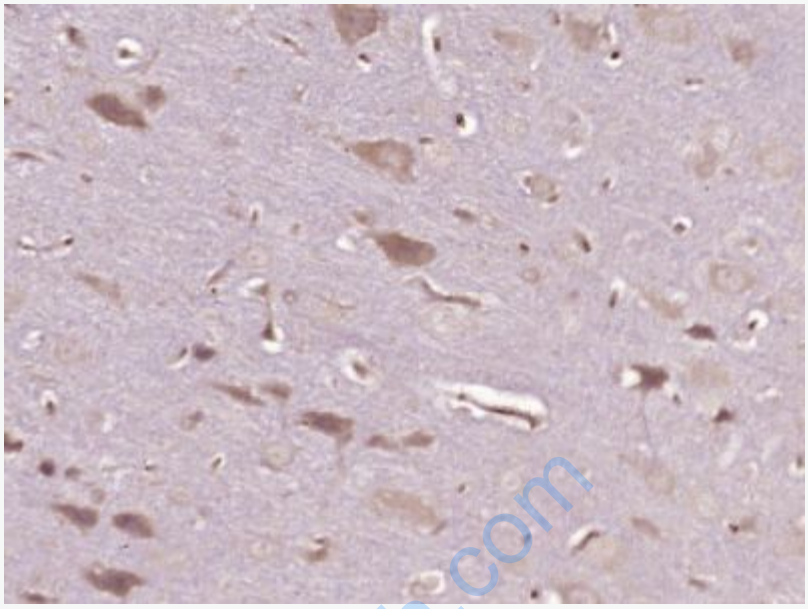
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 45 kD

Observed band size: 45/53 kD



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (mu Opioid receptor) Polyclonal Antibody, Unconjugated (SL3623R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (mu Opioid receptor) Polyclonal Antibody, Unconjugated (SL3623R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.