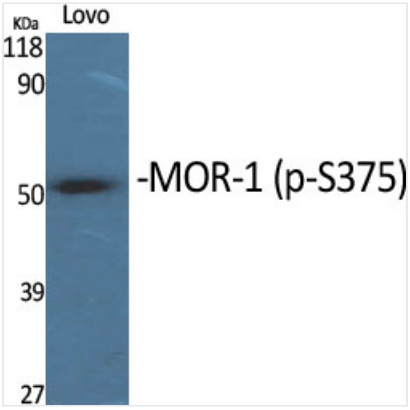
MOR-1 Antibody – Rabbit Polyclonal

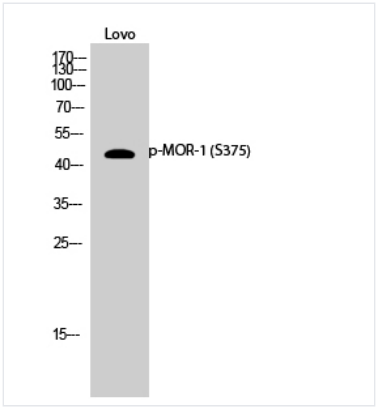
PRODUCT OVERVIEW

Product Name	MOR-1, Polyclonal Antibody
Full Product Name	MOR-1 (phospho Ser375) Polyclonal Antibody
Product Gene Name	anti-MOR-1 antibody
Product Synonym Gene Name	OPRM1
Product Synonym Names	OPRM1; MOR1; Mu-type opioid receptor; M-OR-1; MOR-1; Mu opiate receptor; Mu opioid receptor; MOP; hMOP
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Molecular Weight	44,779 Da
Chromosome Location	Chromosome: 6; NC_000006.11 (154331631..154568001). Location: 6q24-q25
OMIM	600018
3D Structure	ModBase 3D Structure for P35372
Applications Tested/Suitable for anti-MOR-1 antibody	Western Blot (WB), Immunohistochemistry-Paraffin (IHC-P)
Related Product Information for anti-MOR-1 antibody	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: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).

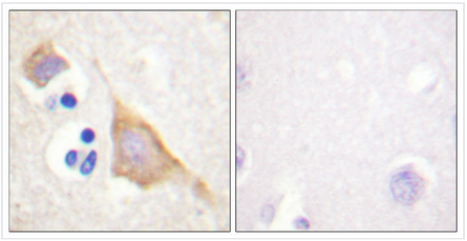
Other Notes	Small volumes of anti-MOR-1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MOR-1 purchase	MBS9242467 is an antibody targeting MOR-1. Also known as MOR-1 (phospho Ser375) Polyclonal Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.



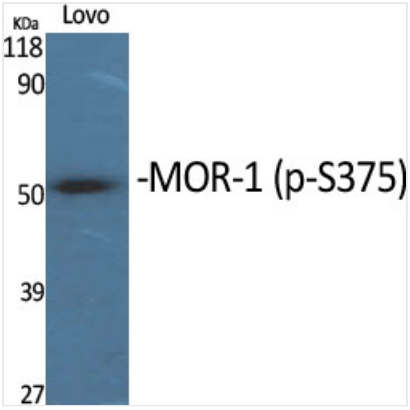
Wester Blot (WB) of anti-MOR-1 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications.



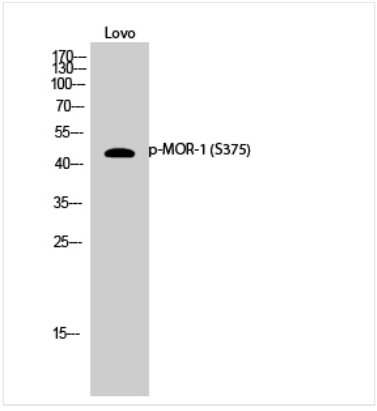
Western Blot (WB) of anti-MOR-1 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications.



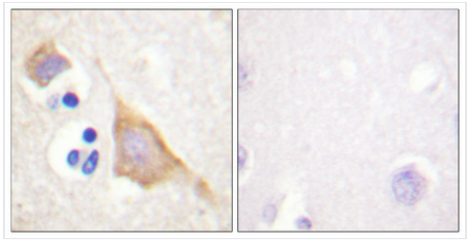
Immunohistochemistry (IHC)-Paraffin of anti-MOR-1 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications.



Western Blot (WB) of anti-MOR-1 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications.



of anti-MOR-1 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications.



Immunohistochemistry (IHC) of anti-MOR-1 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MOR-1. It may not necessarily be applicable to this product.

NCBI GI #	117940060
NCBI GeneID	4988
NCBI Accession #	NP_000905.3
UniProt Primary Accession #	P35372
UniProt Secondary Accession #	Q12930; Q4VWM1; Q4VWM2; Q4VWM3; B0FXJ1; B2R9S7; B8Q1L7; B8Q1L8; B8Q1L9; G8XRH6; G8XRH8
UniProt Related Accession #	P35372
GenBank Nucleotide #	NM_000914.3
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
UniProt Protein Name	Mu-type opioid receptor
UniProt Synonym Protein Names	Mu opiate receptor; Mu opioid receptor
Protein Family	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
NCBI Protein Information	mu-type opioid receptor; mu opiate receptor; mu opioid receptor hMOR-1a
NCBI Summary for MOR-1	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]

UniProt Comments for MOR-1	MOR-1: a Gi-protein-coupled receptor for beta-endorphin, morphine and other opiates. Inhibits neurotransmitter release by reducing calcium ion currents and increasing potassium ion conductance. Ligand-binding inactivates adenylyl cyclase, and activates a variety of G-beta-gamma-dependent pathways including the MAPK and the PI3K/Akt cascades. Two splice-variant isoforms have been described. Protein type: Membrane protein, multi-pass; GPCR, family 1; Membrane protein, integral; Receptor, GPCR Chromosomal Location of Human Ortholog: 6q24-q25 Cellular Component: dendrite cytoplasm; Golgi apparatus; neuron projection; focal adhesion; endoplasmic reticulum; integral to plasma membrane; plasma membrane; perikaryon; sarcolemma; lipid raft Molecular Function: voltage-gated calcium channel activity; G-protein coupled receptor activity; protein domain specific binding; neuropeptide binding; protein binding; G-protein beta-subunit binding; G-protein alpha-subunit binding; beta-endorphin receptor activity; filamin binding Biological Process: positive regulation of nitric oxide biosynthetic process; wound healing; cellular response to stress; locomotory behavior; response to lipopolysaccharide; behavioral response to ethanol; sensory perception of pain; synaptic transmission; negative regulation of cell proliferation; elevation of cytosolic calcium ion concentration; neuropeptide signaling pathway; sensory perception; positive regulation of appetite; dopamine receptor, adenylate cyclase activating pathway; acute inflammatory response to antigenic stimulus; response to food; positive regulation of neurogenesis; negative regulation of nitric oxide biosynthetic process; negative regulation of adenylate cyclase activity; response to cocaine; G-protein signaling, coupled to cyclic nucleotide second messenger; reduction of cytosolic calcium ion concentration; opioid receptor, adenylate cyclase inhibiting pathway; G-protein signaling, coupled to IP3 second messenger (phospholipase C activating); regulation of sensory perception of pain; regulation of excitatory postsynaptic membrane potential Disease: Epilepsy, Idiopathic Generalized
Research Articles on MOR-1	**1.** OPRM1 genetic polymorphisms are associated with the plasma concentration of cotinine in a Taiwanese MMT cohort. Carriers with the major allele of SNP rs1799971 had a higher plasma cotinine concentration.
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