Datasheet for ABIN7138583

anti-Mu Opioid Receptor 1 antibody (pSer375)

1 Image

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Overview

Quantity:	100 µL
Target:	Mu Opioid Receptor 1 (OPRM1)
Binding Specificity:	pSer375
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Mu Opioid Receptor 1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA

Product Details

Immunogen:	Peptide sequence around phosphorylation site of serine 375(H-P-S(p)-T-A) derived from Human Opioid Receptor.
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatogramphy usi

Target Details

Target:	Mu Opioid Receptor 1 (OPRM1)
Alternative Name:	OPRM1 (OPRM1 Products)

Target Details

Background:	Background: 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 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 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. Aliases: hMOP antibody; LMOR antibody; M-OR-1 antibody; MOP antibody; MOR antibody; MOR-1 antibody; MOR1 antibody; Mu opiate receptor antibody; Mu opioid receptor antibody; Mu-type opioid receptor antibody; Opioid receptor mu 1 antibody; OPRM antibody; OPRM_HUMAN antibody; OPRM1 antibody

Target Details

UniProt:	P35372
Pathways:	cAMP Metabolic Process, Synaptic Membrane

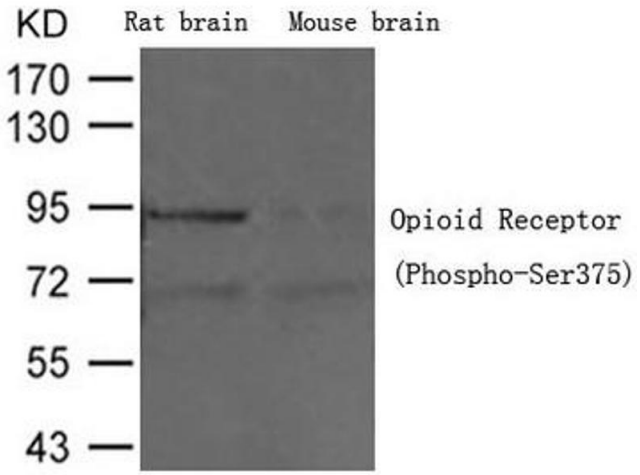
Application Details

Application Notes:	WB:1:500-1:1000,
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Supplied at 1.0 mg/mL in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C,-80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.

Images



Western Blotting

Image 1. Western blot analysis of extracts from Rat brain tissue and Mouse brain tissue using Opioid Receptor (Phospho-Ser375) Antibody.