

Anti-GABAB R1 antibody



Description	Rabbit polyclonal to GABAB R1.
Model	STJ93194
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IF, WB
Immunogen	Synthesized peptide derived from human GABAB R1
Immunogen Region	870-950 aa, C-terminal
Gene ID	2550
Gene Symbol	GABBR1
Dilution range	WB 1:500-1:2000IF 1:200-1:1000ELISA 1:5000
Specificity	GABAB R1 Polyclonal Antibody detects endogenous levels of GABAB R1 protein.
Tissue Specificity	Highly expressed in brain and weakly in heart, small intestine and uterus. Isoform 1A is mostly expressed in granular cell and molecular layer. Isoform 1B is mostly expressed in Purkinje cells. Isoform 1E is predominantly expressed in peripheral tissues as kidney, lung, trachea, colon, small intestine, stomach, bone marrow, thymus and mammary gland.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Gamma-aminobutyric acid type B receptor subunit 1 GABA-B receptor 1

GABA-B-R1 GABA-BR1 GABABR1 Gb1

Molecular Weight	108 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:40700MIM:603540
Alternative Names	Gamma-aminobutyric acid type B receptor subunit 1 GABA-B receptor 1 GABA-B-R1 GABA-BR1 GABABR1 Gb1
Function	Component of a heterodimeric G-protein coupled receptor for GABA, formed by GABBR1 and GABBR2. Within the heterodimeric GABA receptor, only GABBR1 seems to bind agonists, while GABBR2 mediates coupling to G proteins. Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of down-stream effectors, such as adenylate cyclase. Signaling inhibits adenylate cyclase, stimulates phospholipase A2, activates potassium channels, inactivates voltage-dependent calcium-channels and modulates inositol phospholipid hydrolysis. Calcium is required for high affinity binding to GABA. Plays a critical role in the fine-tuning of inhibitory synaptic transmission. Pre-synaptic GABA receptor inhibits neurotransmitter release by down-regulating high-voltage activated calcium channels, whereas postsynaptic GABA receptor decreases neuronal excitability by activating a prominent inwardly rectifying potassium (Kir) conductance that underlies the late inhibitory postsynaptic potentials. Not only implicated in synaptic inhibition but also in hippocampal long-term potentiation, slow wave sleep, muscle relaxation and antinociception. Activated by (-)-baclofen, cgp27492 and blocked by phaclofen.; Isoform 1E may regulate the formation of functional GABBR1/GABBR2 heterodimers by competing for GABBR2 binding. This could explain the observation that certain small molecule ligands exhibit differential affinity for central versus peripheral sites.
Sequence and Domain Family	Alpha-helical parts of the C-terminal intracellular region mediate heterodimeric interaction with GABBR2. The linker region between the transmembrane domain 3 (TM3) and the transmembrane domain 4 (TM4) probably plays a role in the specificity for G-protein coupling.
Cellular Localization	Cell membrane. Multi-pass membrane protein. Cell junction, synapse, postsynaptic cell membrane. Multi-pass membrane protein. Cell projection, dendrite. Colocalizes with ATF4 in hippocampal neuron dendritic membranes . Coexpression of GABBR1 and GABBR2 is required for GABBR1 maturation and transport to the plasma membrane. Isoform 1E: Secreted