Product Name: GABAB R1 Rabbit Polyclonal Antibody
Catalog #: APRab11241
For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat,Guinea Other
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,ICC/IF 1:200-1:1000,ELISA 1:5000-1:10000
Molecular Weight	108kDa

Antigen Information

Gene Name	GABBR1
Alternative Names	GABBR1; GPRC3A; Gamma-aminobutyric acid type B receptor subunit 1; GABA-B receptor 1; GABA-B-R1; GABA-BR1; GABABR1; Gb1
Gene ID	2550.0
SwissProt ID	Q9UBS5
Immunogen	The antiserum was produced against synthesized peptide derived from human GABBR1. AA range:891-940

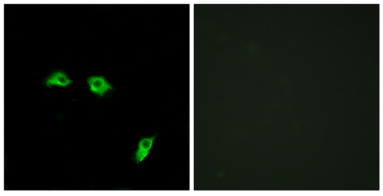
Background

This gene encodes a receptor for gamma-aminobutyric acid (GABA), which is the main inhibitory neurotransmitter in the mammalian central nervous system. This receptor functions as a heterodimer with GABA(B) receptor 2. Defects in this gene may underlie brain disorders such as schizophrenia and epilepsy. Alternative splicing generates multiple transcript variants, but the full-length nature of some of these variants has not been determined. [provided by RefSeq, Jan 2016],alternative products:Isoforms corresponding to the full receptor are essentially found in the central nervous system (CNS),cofactor:Calcium. Required for high affinity binding to GABA.,domain:Alpha-helical parts of the C-terminal intracellular region mediate heterodimeric interaction with GABA-B receptor 2. The linker region between the transmembrane domain 3 (TM3) and the transmembrane domain 4 (TM4) probably play a role in the specificity for G-protein coupling.,function:Isoform 1E function may be to regulate the availability of functional GABA-B-R1A/GABA-B-R2 heterodimers by competing for GABA-B-R2 dimerization. This could explain the observation that certain small molecule ligands exhibit differential affinity for central versus peripheral sites.,function:Receptor for GABA. The activity of this receptor is mediated by G-proteins that inhibit adenylyl cyclase activity, stimulates phospholipase A2, activates potassium channels, inactivates voltage-dependent calcium-channels and modulates inositol phospholipids hydrolysis. Plays a critical role in the fine-tuning of inhibitory synaptic transmission. Pre-synaptic GABA-B-R inhibit neurotransmitter release by down-regulating high-voltage activated calcium channels, whereas postsynaptic GABA-B-R decrease 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.,similarity:Belongs to the G-protein coupled receptor 3 family. GABA-B receptor subfamily.,similarity:Contains 2 Sushi (CCP/SCR) domains.,subcellular location:Colocalizes with ATF4 in hippocampal neuron dendritic membranes (By similarity). Moreover coexpression of GABA-B-R1 and GABA-B-R2 appears to be a prerequisite for maturation and transport of GABA-B-R1 to the plasma membrane.,subunit:Heterodimer of GABA-B-R1 and GABA-B-R2. Neither of which is effective on its own and homodimeric assembly does not seem to happen. Isoform 1E (without C-terminal intracellular domain) is unable to dimerize via a coiled-coil interaction with GABA-B-R2. Interacts with the leucine zipper of the C-terminal bZIP domain of ATF4 via its C-terminal region. Interacts with JAKMIP1.,tissue specificity:Highly expressed in brain and weakly in heart, small intestine and uterus. Mostly expressed in granular cell and molecular layer for isoform 1A and in Purkinje cells form isoform 1B. Isoform 1E is predominantly expressed in peripheral tissues as kidney, lung, trachea, colon, small intestine, stomach, bone marrow, thymus and mammary gland.,

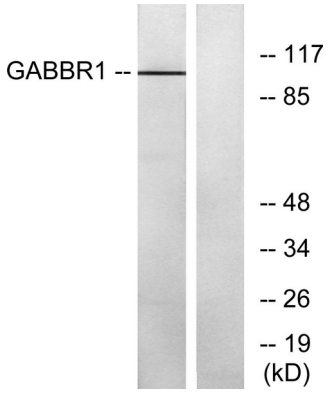
Research Area

Neuroactive ligand-receptor interaction;

Image Data



Immunofluorescence analysis of HeLa cells, using GABBR1 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from K562 cells, using GABBR1 Antibody. The lane on the right is blocked with the synthesized peptide.