

GABA B Receptor 2 Polyclonal Antibody

Catalog # AP63681

Product Information

Application	IHC-P
Primary Accession	O75899
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	105821

Additional Information

Gene ID	9568
Other Names	GABBR2; GPR51; GPRC3B; Gamma-aminobutyric acid type B receptor subunit 2; GABA-B receptor 2; GABA-B-R2; GABA-BR2; GABABR2; Gb2; G-protein coupled receptor 51; HG20
Dilution	IHC-P~~IHC 1:100-200
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

Protein Information

Name	GABBR2
Synonyms	GPR51, GPRC3B
Function	<p>Component of a heterodimeric G-protein coupled receptor for GABA, formed by GABBR1 and GABBR2 (PubMed:15617512, PubMed:18165688, PubMed:22660477, PubMed:24305054, PubMed:9872316, PubMed:9872744). Within the heterodimeric GABA receptor, only GABBR1 seems to bind agonists, while GABBR2 mediates coupling to G proteins (PubMed:18165688). 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 (PubMed:10075644, PubMed:10773016, PubMed:24305054). Signaling inhibits adenylate cyclase, stimulates phospholipase A2, activates potassium channels, inactivates voltage-dependent calcium-channels and modulates inositol phospholipid hydrolysis (PubMed:10075644, PubMed:10773016, PubMed:10906333, PubMed:9872744). Plays a critical role in the fine-tuning of inhibitory synaptic transmission (PubMed:22660477, PubMed:9872744). Pre-synaptic GABA receptor inhibits neurotransmitter release by down-regulating high-voltage</p>

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 (PubMed:[10075644](#), PubMed:[22660477](#), PubMed:[9872316](#), PubMed:[9872744](#)). Not only implicated in synaptic inhibition but also in hippocampal long-term potentiation, slow wave sleep, muscle relaxation and antinociception (Probable).

Cellular Location

Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane {ECO:0000250|UniProtKB:O88871}; Multi-pass membrane protein. Note=Coexpression of GABBR1 and GABBR2 is required for GABBR1 maturation and transport to the plasma membrane. In contrast, GABBR2 does not depend on GABBR1 for transport to the cell membrane

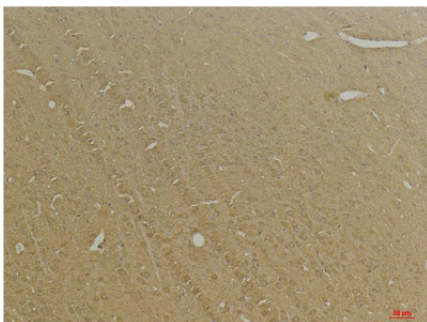
Tissue Location

Highly expressed in brain, especially in cerebral cortex, thalamus, hippocampus, frontal, occipital and temporal lobe, occipital pole and cerebellum, followed by corpus callosum, caudate nucleus, spinal cord, amygdala and medulla (PubMed:10087195, PubMed:10328880, PubMed:10727622, PubMed:9872744). Weakly expressed in heart, testis and skeletal muscle (PubMed:10087195, PubMed:10727622)

Background

Component of a heterodimeric G-protein coupled receptor for GABA, formed by GABBR1 and GABBR2 (PubMed:[9872316](#), PubMed:[9872744](#), PubMed:[15617512](#), PubMed:[18165688](#), PubMed:[22660477](#), PubMed:[24305054](#)). Within the heterodimeric GABA receptor, only GABBR1 seems to bind agonists, while GABBR2 mediates coupling to G proteins (PubMed:[18165688](#)). 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 (PubMed:[10075644](#), PubMed:[10773016](#), PubMed:[24305054](#)). Signaling inhibits adenylate cyclase, stimulates phospholipase A2, activates potassium channels, inactivates voltage-dependent calcium-channels and modulates inositol phospholipid hydrolysis (PubMed:[10075644](#), PubMed:[9872744](#), PubMed:[10906333](#), PubMed:[10773016](#)). Plays a critical role in the fine-tuning of inhibitory synaptic transmission (PubMed:[9872744](#), PubMed:[22660477](#)). 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 (PubMed:[9872316](#), PubMed:[10075644](#), PubMed:[9872744](#), PubMed:[22660477](#)). Not only implicated in synaptic inhibition but also in hippocampal long-term potentiation, slow wave sleep, muscle relaxation and antinociception (Probable).

Images



Immunohistochemical analysis of paraffin-embedded Rat BrainTissue using GABA B Receptor 2 Rabbit pAb diluted at 1:200.

Immunohistochemical analysis of paraffin-embedded Mouse BrainTissue using GABA B Receptor 2 Rabbit pAb diluted at 1:200.



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