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GABA A Receptor γ2 Polyclonal Antibody

Catalog # AP63682

Product Information

Application	WB, IHC-P
Primary Accession	P18507
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55186

Additional Information

Gene ID	2566
Other Names	Gamma-aminobutyric acid receptor subunit gamma-2 (GABA(A) receptor subunit gamma-2)
Dilution	WB~~WB 1:1000-2000, IHC 1:100-200 IHC-P~~WB 1:1000-2000, IHC 1:100-200
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

Name	GABRG2 (HGNC:4087)
Function	Gamma subunit of the heteropentameric ligand-gated chloride channel gated by gamma-aminobutyric acid (GABA), a major inhibitory neurotransmitter in the brain (PubMed:14993607, PubMed:16412217, PubMed:23909897, PubMed:2538761, PubMed:25489750, PubMed:27864268, PubMed:29950725, PubMed:30602789). GABA-gated chloride channels, also named GABA(A) receptors (GABAAR), consist of five subunits arranged around a central pore and contain GABA active binding site(s) located at the alpha and beta subunit interface(s) (PubMed:29950725, PubMed:30602789). When activated by GABA, GABAARs selectively allow the flow of chloride anions across the cell membrane down their electrochemical gradient (PubMed:14993607, PubMed:16412217, PubMed:2538761, PubMed:27864268, PubMed:29950725, PubMed:30602789). Gamma-2/GABRG2-containing GABAARs are found at both synaptic and extrasynaptic sites (By similarity). Chloride influx into the postsynaptic neuron following GABAAR opening decreases the neuron ability to generate a new action potential, thereby reducing nerve transmission (By similarity). GABAARs containing alpha-1 and beta-2 or -3 subunits exhibit synaptogenic activity; the gamma-2 subunit being necessary but not sufficient to induce

rapid synaptic contacts formation (PubMed:23909897, PubMed:25489750). Extrasynaptic gamma-2- containing receptors contribute to the tonic GABAergic inhibition (By similarity). GABAARs function also as histamine receptor where histamine binds at the interface of two neighboring beta subunits and potentiates GABA response in a gamma-2 subunit-controlled manner (By similarity).

Cellular Location

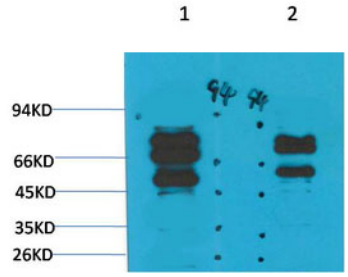
Postsynaptic cell membrane; Multi-pass membrane protein {ECO:0000269|PubMed:30602789, ECO:0007744|PDB:6I53}. Cell membrane; Multi-pass membrane protein {ECO:0000269|PubMed:30602789, ECO:0007744|PDB:6I53} Cell projection, dendrite {ECO:0000250|UniProtKB:P22723}. Cytoplasmic vesicle membrane {ECO:0000250|UniProtKB:P18508}

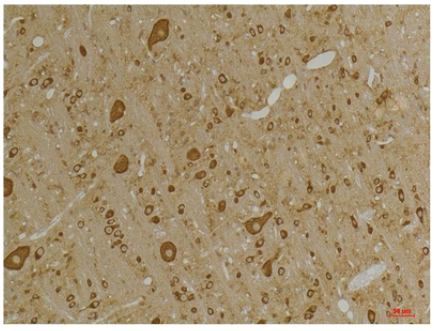
Background

Component of the heteropentameric receptor for GABA, the major inhibitory neurotransmitter in the vertebrate brain. Functions also as histamine receptor and mediates cellular responses to histamine. Functions as receptor for diazepines and various anesthetics, such as pentobarbital; these are bound at a separate allosteric effector binding site. Functions as ligand- gated chloride channel.

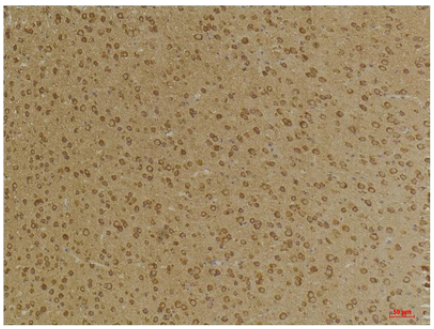
Images

Western blot analysis of 1) Mouse Brain Tissue, 2)Rat Brain Tissue with GABA A Receptor γ2 Rabbit pAb diluted at 1:2,000.





Immunohistochemical analysis of paraffin-embedded Rat BrainTissue using GABA A Receptor γ2 Rabbit pAb diluted at 1:200.



Immunohistochemical analysis of paraffin-embedded Mouse BrainTissue using GABA A Receptor γ2 Rabbit pAb diluted at 1:200.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.