10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GABR B3 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP59032

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	P28472
Reactivity	Rat, Pig, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	54116
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GABR B3/GABA A Receptor beta 3
Epitope Specificity	31-130/473
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Plasma membrane
SIMILARITY	Belongs to the ligand-gated ion channel (TC 1.A.9) family. Gamma-aminobutyric acid receptor (TC 1.A.9.5) subfamily. GABRB3 sub-subfamily.
SUBUNIT	Heteropentamer, formed by a combination of alpha, beta, gamma, delta and rho chains. Can form functional homopentamers (in vitro). Interacts with UBQLN1. May interact with KIF21B. Identified in a complex of 720 kDa composed of LHFPL4, NLGN2, GABRA1, GABRB2, GABRG2 and GABRB3 . Interacts with LHFPL4.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a member of the ligand-gated ionic channel family. The encoded protein is one the subunits of a multi-subunit chloride channel that serves as the receptor for gamma-aminobutyric acid, a major inhibitory neurotransmitter of the mammalian nervous system. This gene is located on the long arm of chromosome 15 in a cluster with two other genes encoding related subunits of the family. This gene may be associated with the pathogenesis of several disorders including Angelman syndrome, Prader-Willi syndrome, nonsyndromic orofacial clefts, epilepsy and autism. Alternatively spliced transcript variants encoding distinct isoforms have been described. [provided by RefSeq, Jul 2013]

Additional Information

Gene ID	2562
Other Names	Gamma-aminobutyric acid receptor subunit beta-3, GABA(A) receptor subunit beta-3, GABRB3

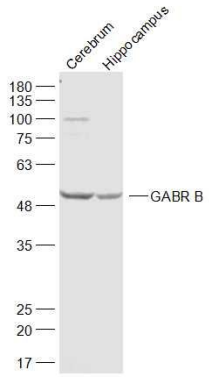
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:50-200, Flow-Cyt=1 □g/Test,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

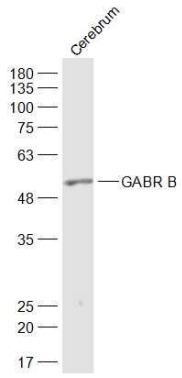
Name	GABRB3 (HGNC:4083)
Function	Beta subunit of the heteropentameric ligand-gated chloride channel gated by gamma-aminobutyric acid (GABA), a major inhibitory neurotransmitter in the brain (PubMed:14993607, PubMed:18514161, PubMed:22243422, PubMed:22303015, PubMed:24909990, PubMed:26950270, PubMed:30602789). 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:24909990, PubMed:30140029, PubMed:30602789). GABAARs containing beta-3/GABRB3 subunit are found at both synaptic and extrasynaptic sites (By similarity). When activated by GABA, GABAARs selectively allow the flow of chloride anions across the cell membrane down their electrochemical gradient (PubMed:14993607, PubMed:22303015, PubMed:26950270, PubMed:30602789). Chloride influx into the postsynaptic neuron following GABAAR opening decreases the neuron ability to generate a new action potential, thereby reducing nerve transmission (PubMed:22303015, PubMed:26950270). GABAARs containing alpha-1 and beta-3 subunits exhibit synaptogenic activity; the gamma-2 subunit being necessary but not sufficient to induce rapid synaptic contacts formation (PubMed:25489750). Extrasynaptic beta-3 receptors contribute to the tonic GABAergic inhibition (By similarity). GABAARs containing alpha-1, beta-3 and epsilon subunits may also permit spontaneous chloride channel activity while preserving the structural information required for GABA-gated openings (By similarity). Beta- containing GABAARs can simultaneously bind GABA and histamine where histamine binds at the interface of two neighboring beta subunits, which may be involved in the regulation of sleep and wakefulness (PubMed:18281286, PubMed:24909990, PubMed:35355020). Plays an important role in somatosensation and in the production of antinociception (By similarity).
Cellular Location	Postsynaptic cell membrane; Multi-pass membrane protein {ECO:0000269|PubMed:24909990, ECO:0000269|PubMed:35355020, ECO:0007744|PDB:7QN7}. Cell membrane; Multi-pass membrane protein {ECO:0000269|PubMed:24909990, ECO:0000269|PubMed:35355020, ECO:0007744|PDB:7QN7}. Cytoplasmic vesicle membrane {ECO:0000250|UniProtKB:P63079}

Images

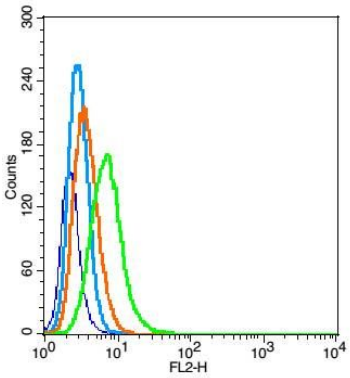
Sample:
Cerebrum (Mouse) Lysate at 40 ug
Hippocampus (Mouse) Lysate at 40 ug
Primary: Anti-GABR B3 (AP59032) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at



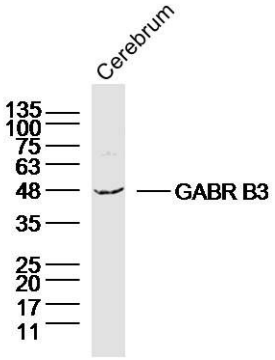
1/20000 dilution
Predicted band size: 52 kD
Observed band size: 52 kD



Sample:
Cerebrum (Rat) Lysate at 40 ug
Primary: Anti-GABR B3 (AP59032) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 52 kD
Observed band size: 52 kD



Blank control(blue):RSC96 (fixed with 2% paraformaldehyde (10 min)).
Primary Antibody:Rabbit Anti- GABR B3 antibody(AP59032), Dilution: 1 µg in 100 µL 1X PBS containing 0.5% BSA;
Isotype Control Antibody: Rabbit IgG(orange) ,used under the same conditions);
Secondary Antibody: Goat anti-rabbit IgG-PE(white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.



Sample: Cerebrum (Mouse) Lysate at 40 ug
Primary: Anti-GABR B3 (AP59032) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 52 kD
Observed band size: 48 kD