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Anti-GABRB3 Picoband Antibody

Catalog # ABO12281

Product Information

Application	WB
Primary Accession	P28472
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Gamma-aminobutyric acid receptor subunit beta-3(GABRB3) detection. Tested with WB in Human;Mouse; Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	2562
Other Names	Gamma-aminobutyric acid receptor subunit beta-3, GABA(A) receptor subunit beta-3, GABRB3
Calculated MW	54116
Application Details	Western blot, 0.1-0.5 □g/ml, Mouse, Rat, Human
Subcellular Localization	Cell junction, synapse, postsynaptic cell membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein.
Source	Eukaryota
Protein Name	Gamma-aminobutyric acid receptor subunit beta-3
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human GABRB3 (344-375aa EKTAKAKNDRSKSESNRVDAHGNILLTSLEVH), different from the related mouse and rat sequences by five amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities	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.

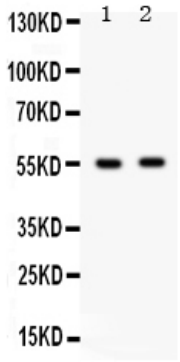
Protein Information

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}

Background

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. And this gene is located on the long arm of chromosome 15 in a cluster with two other genes encoding related subunits of the family. It 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.

Images



Anti- GABRB3 Picoband antibody, ABO12281, Western blottingAll lanes: Anti GABRB3 (ABO12281) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Brain Tissue Lysate at 50ugPredicted bind size: 54KDObserved bind size: 54KD

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