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CHRNB2 antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI10149

Product Information

Application	WB, IHC
Primary Accession	P17787
Other Accession	P17787, NP_000739, NM_000748
Reactivity	Human, Mouse, Rat, Pig, Dog, Guinea Pig, Bovine
Predicted	Human, Mouse, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57019

Additional Information

Gene ID	1141
Alias Symbol	EFNL3, nAChRB2
Other Names	Neuronal acetylcholine receptor subunit beta-2, CHRNB2
Target/Specificity	Mutations in nAChRs are found in a rare form of nocturnal frontal lobe epilepsy . Previously, some nAChR mutations have been described that are associated with additional neurological features such as psychiatric disorders or cognitive defects. A new CHRNB2 mutation located in transmembrane region 3 (M3), outside the known ADNFLE mutation cluster. The CHRNB2 mutation I312M, which occurred de novo in twins, markedly increases the receptor's sensitivity to acetylcholine. Phenotypically, the mutation is associated not only with typical ADNFLE, but also with distinct deficits in memory. The cognitive problems are most obvious in tasks requiring the organization and storage of verbal information.
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 100 ul of distilled water. Final anti-CHRNB2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles.
Precautions	CHRNB2 antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

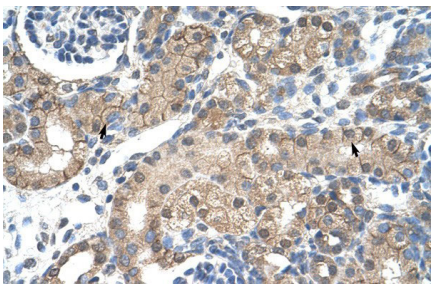
Name	CHRNB2 (HGNC:1962)

Function	Component of neuronal acetylcholine receptors (nAChRs) that function as pentameric, ligand-gated cation channels with high calcium permeability among other activities. nAChRs are excitatory neurotrasnmitter receptors formed by a collection of nAChR subunits known to mediate synaptic transmission in the nervous system and the neuromuscular junction. Each nAchR subunit confers differential attributes to channel properties, including activation, deactivation and desensitization kinetics, pH sensitivity, cation permeability, and binding to allosteric modulators (PubMed:22361591, PubMed:27698419, PubMed:29720657, PubMed:38454578). CHRNB2 forms heteropentameric neuronal acetylcholine receptors with CHRNA2, CHRNA3, CHRNA4 and CHRNA6, as well as CHRNA5 and CHRNB3 as accesory subunits (PubMed:16835356, PubMed:20881005, PubMed:22361591, PubMed:27698419, PubMed:29720657, PubMed:38454578, PubMed:8663494). Found in two major stoichiometric forms,(CHRNA4)3:(CHRNB2)2 and (CHRNA4)2:(CHRNB2)3, the two stoichiometric forms differ in their unitary conductance, calcium permeability, ACh sensitivity and potentiation by divalent cation (PubMed:27698419, PubMed:29720657, PubMed:38454578). Heteropentameric channels with CHRNA6 and CHRNA4 exhibit high sensitivity to ACh and nicotine and are predominantly expressed in only a few brain areas, including dopaminergic neurons, norepirephrine neurons and cells of the visual system. nAChrs containing CHRNA6 subunits mediate endogenous cholinergic modulation of dopamine and gamma-aminobutyric acid (GABA) release in response to nicotine at nerve terminals (By similarity). Also forms functional nAChRs with other subunits such as CHRNA7:CHRNB2, mainly expressed in basal forebrain cholinergic neurons (PubMed:33239400, PubMed:38161283).
Cellular Location	Synaptic cell membrane {ECO:0000250|UniProtKB:P12390}; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein

Background

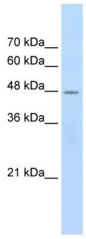
This is a rabbit polyclonal antibody against CHRNB2. It was validated on Western Blot and immunohistochemistry by Abgent. At Abgent we manufacture rabbit polyclonal antibodies on a large scale (200-1000 products/month) of high throughput manner. Our antibodies are peptide based and protein family oriented. We usually provide antibodies covering each member of a whole protein family of your interest. We also use our best efforts to provide you antibodies recognize various epitopes of a target protein. For availability of antibody needed for your experiment, please inquire (sales@abgent.com).

Images



CHRNB2 antibody - middle region (AI10149) in Human kidney cells using Immunohistochemistry
Human kidney

CHRNB2 antibody - middle region (AI10149) in Human Jurkat cells using Western Blot
WB Suggested Anti-CHRNB2 Antibody Titration: 2.5 µg/ml
Positive Control: Jurkat cell lysate
CHRNB2 is supported by BioGPS gene expression data to be expressed in Jurkat



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