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Goat Anti-CHRNB2 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1241a

Specification

Goat Anti-CHRNB2 Antibody - Product Information

Application	**WB, E**
Primary Accession	P17787
Other Accession	NP_000739, 1141
Reactivity	**Human**
Predicted	**Mouse, Rat, Pig, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**57019**

Goat Anti-CHRNB2 Antibody - Additional Information

Gene ID 1141

Other Names
Neuronal acetylcholine receptor subunit beta-2, CHRNB2

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-CHRNB2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-CHRNB2 Antibody - 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

Goat Anti-CHRNB2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-CHRNB2 Antibody - Images

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AF1241a (1 µg/ml) staining of Human Cerebellum lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-CHRNB2 Antibody - Background

Neuronal acetylcholine receptors are homo- or heteropentameric complexes composed of homologous alpha and beta subunits. They belong to a superfamily of ligand-gated ion channels which allow the flow of sodium and potassium across the plasma membrane in response to ligands such as acetylcholine and nicotine. This gene encodes one of several beta subunits. Mutations in this gene are associated with autosomal dominant nocturnal frontal lobe epilepsy.

Goat Anti-CHRNB2 Antibody - References

Resequencing of Nicotinic Acetylcholine Receptor Genes and Association of Common and Rare Variants with the Fagerstr□m Test for Nicotine Dependence. Wessel J, et al. Neuropsychopharmacology, 2010 Aug 25. PMID 20736995.
An approach based on a genome-wide association study reveals candidate loci for narcolepsy. Shimada M, et al. Hum Genet, 2010 Oct. PMID 20677014.
Intermediate phenotypes identify divergent pathways to Alzheimer's disease. Shulman JM, et al. PLoS One, 2010 Jun 21. PMID 20574532.
Association of CR1, CLU and PICALM with Alzheimer's disease in a cohort of clinically characterized and neuropathologically verified individuals. Corneveaux JJ, et al. Hum Mol Genet, 2010 Aug 15. PMID 20534741.
NMR structure of the transmembrane domain of the n-acetylcholine receptor beta2 subunit. Bondarenko V, et al. Biochim Biophys Acta, 2010 Aug. PMID 20441771.