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Goat Anti-CHRNB3 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1242a

Specification

Goat Anti-CHRNB3 Antibody - Product Information

Application	**WB, E**
Primary Accession	Q05901
Other Accession	NP_000740, 1142, 108043 (mouse), 171131 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**52729**

Goat Anti-CHRNB3 Antibody - Additional Information

Gene ID 1142

Other Names
Neuronal acetylcholine receptor subunit beta-3, CHRNB3

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-CHRNB3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-CHRNB3 Antibody - Protein Information

Name CHRNB3 (HGNC:1963)

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:11118490, PubMed:16835356, PubMed:35889515). Has an accessory rather than functional role and is only able to form functional nAChRs when co-assembled with another beta subunit (PubMed:11118490, PubMed:16835356). Participates in pentameric assemblies along with CHRNA3, CHRNA4, CHRNA6, CHRNB2 and CHRNB4 (PubMed:11118490, PubMed:16835356). Modulates receptor assembly and increases receptor sensitivity to nicotine when associated with CHRNB2, CHRNA4 and/or CHRNA6 as well as CHRNA3 and CHRNB4 (PubMed:11118490, PubMed:16835356). Seems to play a role in nicotine addiction (PubMed:11118490, PubMed:16835356).

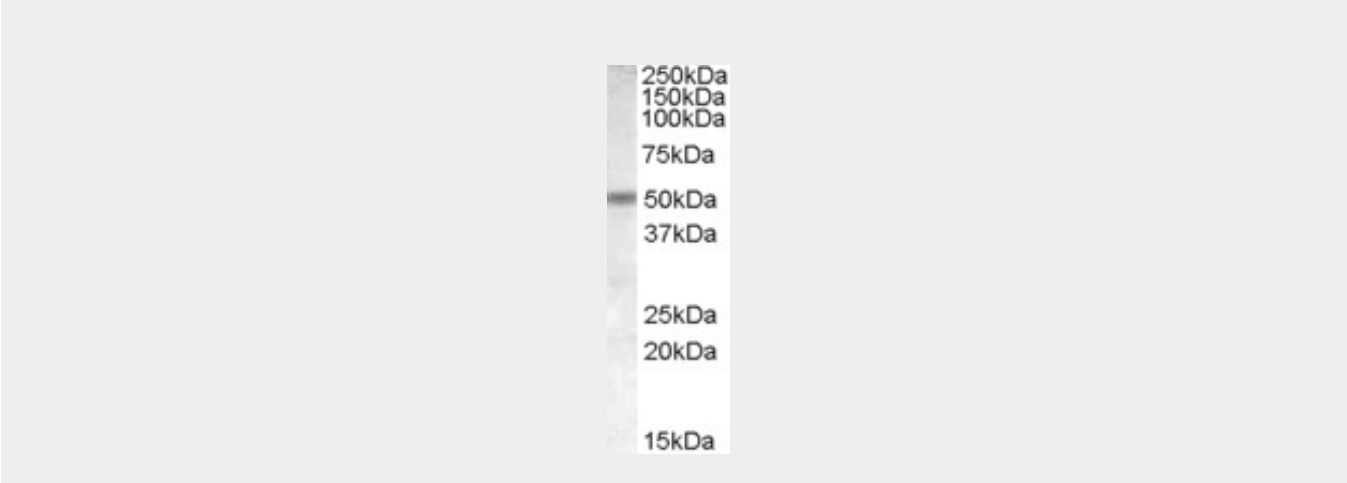
Cellular Location
Synaptic cell membrane {ECO:0000250|UniProtKB:O70174}; Multi-pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:O70174}; Multi-pass membrane protein

Goat Anti-CHRNB3 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-CHRNB3 Antibody - Images



AF1242a (1 µg/ml) staining of Human Cerebellum lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-CHRNB3 Antibody - Background

The nicotinic acetylcholine receptors (nAChRs) are members of a superfamily of ligand-gated ion channels that mediate fast signal transmission at synapses. The nAChRs are (hetero)pentamers composed of homologous subunits. The subunits that make up the muscle and neuronal forms of nAChRs are encoded by separate genes and have different primary structure. There are several subtypes of neuronal nAChRs that vary based on which homologous subunits are arranged around the central channel. They are classified as alpha-subunits if, like muscle alpha-1 (MIM 100690), they have a pair of adjacent cysteines as part of the presumed acetylcholine binding site. Subunits lacking these cysteine residues are classified as beta-subunits (Groot Kormelink and Luyten, 1997 [PubMed 9009220]). Elliott et al. (1996) [PubMed 8906617] stated that the proposed structure for each subunit is a conserved N-terminal extracellular domain followed by 3 conserved transmembrane domains, a variable cytoplasmic loop, a fourth conserved transmembrane domain, and a short C-terminal extracellular region.

Goat Anti-CHRNB3 Antibody - References

Multiple cholinergic nicotinic receptor genes affect nicotine dependence risk in African and European Americans. Saccone NL, et al. Genes Brain Behav, 2010 Jun 22. PMID 20584212.
Sequence variants at CHRNB3-CHRNA6 and CYP2A6 affect smoking behavior. Thorgeirsson TE, et al. Nat Genet, 2010 May. PMID 20418888.
Why do young women smoke? VI. A controlled study of nicotine effects on attention: pharmacogenetic interactions. Rigbi A, et al. Pharmacogenomics J, 2010 Mar 16. PMID 20231857.
Association of CHRN genes with dizziness to tobacco. Ehringer MA, et al. Am J Med Genet B Neuropsychiatr Genet, 2010 Mar 5. PMID 19760673.
SNPs in CHRNA6 and CHRNB3 are associated with alcohol consumption in a nationally representative sample. Hoft NR, et al. Genes Brain Behav, 2009 Aug. PMID 19500157.