

CHRFAM7A / CHRNA7-FAM7A Antibody (N-Term)
Peptide-affinity purified goat antibody
Catalog # AF2743a

Specification

CHRFAM7A / CHRNA7-FAM7A Antibody (N-Term) - Product Information

Application	E
Primary Accession	P36544
Other Accession	NP_647536.1, 89832
Predicted	Human
Host	Goat
Clonality	Polyclonal
Concentration	0.5 mg/ml
Isotype	IgG
Calculated MW	56449

CHRFAM7A / CHRNA7-FAM7A Antibody (N-Term) - Additional Information

Gene ID 1139;89832

Other Names

Neuronal acetylcholine receptor subunit alpha-7, CHRNA7, NACHRA7

Dilution

E~~N/A

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 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

CHRFAM7A / CHRNA7-FAM7A Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

CHRFAM7A / CHRNA7-FAM7A Antibody (N-Term) - Protein Information

Name CHRNA7 ([HGNC:1960](#))

Synonyms NACHRA7

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 neurotransmitter 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:15609996, PubMed:33735609, PubMed:8145738). CHRNA7 forms homopentameric neuronal acetylcholine receptors abundantly expressed in the central nervous system, characterized by fast desensitization and high calcium permeability (PubMed:31560909, PubMed:33735609, PubMed:38382524, PubMed:8145738). Also forms heteropentamers with CHRNB2, mainly expressed in basal forebrain cholinergic neurons. Involved in the modulation of calcium- dependent signaling pathways and influences the release of neurotransmitters, including dopamine, glutamate and GABA (PubMed:33239400). Also expressed in non-neuronal cells such as immune cells like lymphocytes, monocytes and macrophages (PubMed:12508119, PubMed:16968406, PubMed:25259522). In T cells, activation induces metabotropic signaling that results in an increase of intracellular Ca²⁺ concentrations, independent of ionotropic receptor functions (PubMed:17709503). In macrophages, required for acetylcholine-mediated inhibition of TNF and other inflammatory cytokine release (PubMed:12508119). Once activated by acetylcholine, nicotine or other agonists, selectively inhibits production of pro-inflammatory cytokines while leaving anti-inflammatory cytokines undisturbed (PubMed:12508119, PubMed:25259522). Stimulates the cholinergic anti-inflammatory pathway, controlling inflammation by inhibiting NFKB nuclear translocation and activating the JAK2-STAT3 pathway, independently of ion channel activity (PubMed:16968406, PubMed:25259522). Also expressed in the urothelium where it modulates reflex bladder activity by increasing intracellular calcium through internal stores and decreasing basal ATP release (By similarity).

Cellular Location

Postsynaptic cell membrane {ECO:0000250|UniProtKB:Q05941}; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Note=TMEM35A/NACHO promotes its trafficking to the cell membrane (PubMed:27789755). RIC3 promotes its trafficking to the cell membrane (By similarity) {ECO:0000250|UniProtKB:Q05941, ECO:0000269|PubMed:27789755}

Tissue Location

Expressed in neuronal cells (PubMed:8145738). Expressed in macrophages (at protein level) (PubMed:12508119)

CHRFAM7A / CHRNA7-FAM7A Antibody (N-Term) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CHRFAM7A / CHRNA7-FAM7A Antibody (N-Term) - Images**CHRFAM7A / CHRNA7-FAM7A Antibody (N-Term) - Background**

This antibody is expected to recognize reported isoform NP_647536.1 only.

CHRFAM7A / CHRNA7-FAM7A Antibody (N-Term) - References

Sensory gating and alpha-7 nicotinic receptor gene allelic variants in schizoaffective disorder, bipolar type. Martin LF, Leonard S, Hall MH, Tregellas JR, Freedman R, Olincy A. Am J Med Genet B Neuropsychiatr Genet. 2007 Jul 5;144(5):611-4. PMID: 17192894