

Recombinant Human CHRNA7 Protein, GST-Tagged

Cat. No. CHRNA7-1283H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Human CHRNA7 full-length ORF (AAH37571, 1 a.a. - 321 a.a.) recombinant protein with GST-tag at N-terminal.

Species

Human

Source

Wheat Germ

Description

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 thought to be hetero-pentamers composed of homologous subunits. The proposed structure for each subunit is a conserved N-terminal extracellular domain followed by three conserved transmembrane domains, a variable cytoplasmic loop, a fourth conserved transmembrane domain, and a short C-terminal extracellular region. The protein encoded by this gene forms a homo-oligomeric channel, displays marked permeability to calcium ions and is a major component of brain nicotinic receptors that are blocked by, and highly sensitive to, alpha-bungarotoxin. Once this receptor binds acetylcholine, it undergoes an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane. This gene is located in a region identified as a major susceptibility locus for juvenile myoclonic epilepsy and a chromosomal location involved in the genetic transmission of schizophrenia. An evolutionarily recent partial duplication event in this region results in a hybrid containing sequence from this gene and a novel FAM7A gene. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2012]

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Molecular Mass	61.05 kDa
AA Sequence	MQEADISGYIPNGEWDLVGIPGKRSERFYECCKEPYPDVTFVTMRRRTLYYGLSLL IPCVLISALALLVFLLPADSGEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFAS TMITVGLSVVTVIVLQYHHHDPDGGKMPKWTRVILLNWCAWFLRMKRPGEDKVRP ACQHKQRRCSLASVEMSAVAPPPASNGNLLYIGFRGLDGVHCVPTPDSGVVCGRM ACSPTHDEHLLHGGQPPEGDPDLAKILEEVRYIANRFRQCDESEAVCSEWKFAACV VDRLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
Applications	Enzyme-linked Immunoabsorbent Assay Western Blot (Recombinant protein) Antibody Production Protein Array
Storage	Store at -80 centigrade. Aliquot to avoid repeated freezing and thawing.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.

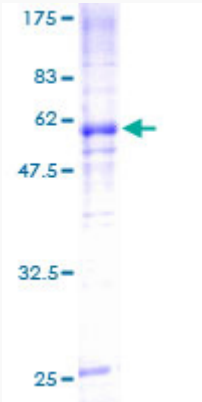
GENE INFORMATION

Gene Name	CHRNA7 cholinergic receptor, nicotinic, alpha 7 (neuronal) [Homo sapiens]
Official Symbol	CHRNA7
Synonyms	CHRNA7; cholinergic receptor, nicotinic, alpha 7 (neuronal); cholinergic receptor, nicotinic, alpha polypeptide 7; neuronal acetylcholine receptor subunit alpha-7; acetylcholine receptor; nicotinic, alpha 7 (neuronal); a7 nicotinic acetylcholine receptor; alpha-7 nicotinic cholinergic receptor subunit; alpha 7 neuronal nicotinic acetylcholine receptor; acetylcholine receptor, nicotinic, alpha 7 (neuronal); neuronal acetylcholine receptor protein, alpha-7 chain; NACHRA7; CHRNA7-2;

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Gene ID	1139
mRNA Refseq	NM_000746
Protein Refseq	NP_000737
MIM	118511
UniProt ID	P36544
Quality Control Testing	 12.5% SDS-PAGE Stained with Coomassie Blue.