

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

## GENE INFORMATION

<b>Gene Name</b>	CHRNA7 cholinergic receptor, nicotinic, alpha 7 (neuronal) [ Homo sapiens ]
<b>Official Symbol</b>	CHRNA7
<b>Synonyms</b>	<p>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;</p>

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Gene ID 1139

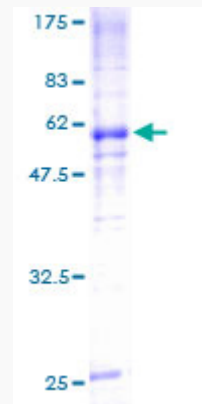
mRNA Refseq NM\_000746

Protein Refseq NP\_000737

MIM 118511

UniProt ID P36544

**Quality Control  
Testing**



12.5% SDS-PAGE Stained with Coomassie Blue.

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