

Recombinant Full Length Human CHRNA7 Protein, GST-tagged

Cat. No. CHRNA7-3240HF **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

In Vitro Cell Free System

ProteinLength

321 amino acids

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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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]

Molecular Mass 61.05 kDa

AA Sequence
 MQEADISGYIPNGEWDLVGIPGKRSEFYECCKEYPDPVTFVTMRRRTLYYGLSLL
 IPCVLISALALLVFLLPADSGEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFAS
 TMITVGLSVVVTIVLQYHHHDPDGGKMPKWTRVILLNWCWFLRMKRPGEDKVRP
 ACQHKQRRCSLASVEMSAVAPPASNGNLLYIGFRGLDGVHCVPTPDSGVVCGRM
 ACSPTHDEHLLHGGQPPEGDPDLAKILEEVRYIANRFRCQDESEAVCSEWKFAACV
 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

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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;

Gene ID 1139

mRNA Refseq NM_000746

Protein Refseq NP_000737

MIM 118511

UniProt ID P36544

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