



Human CHR7 blocking peptide (DAG-P1765)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Antigen 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]

Conjugate	Unconjugated
Applications	BL
Sequence Similarities	Belongs to the ligand-gated ion channel (TC 1.A.9) family. Acetylcholine receptor (TC 1.A.9.1) subfamily. Alpha-7/CHR7 sub-subfamily.
Format	Liquid
Preservative	None
Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. Information available upon request.

GENE INFORMATION

Gene Name	CHRNA7 cholinergic receptor, nicotinic, alpha 7 (neuronal) [Homo sapiens (human)]
Official Symbol	CHRNA7
Synonyms	CHRNA7; cholinergic receptor, nicotinic, alpha 7 (neuronal); NACHRA7; CHRNA7-2; neuronal acetylcholine receptor subunit alpha-7; a7 nicotinic acetylcholine receptor; alpha-7 nicotinic cholinergic receptor subunit; alpha 7 neuronal nicotinic acetylcholine receptor; cholinergic receptor, nicotinic, alpha polypeptide 7; neuronal acetylcholine receptor protein, alpha-7 chain;
Entrez Gene ID	1139
mRNA Refseq	NM_000746.5
Protein Refseq	NP_000737.1
UniProt ID	P36544
Chromosome Location	15q14
Pathway	Acetylcholine Binding And Downstream Events, organism-specific biosystem; Activation of Nicotinic Acetylcholine Receptors, organism-specific biosystem; Calcium signaling pathway, organism-specific biosystem; Calcium signaling pathway, conserved biosystem; Chemical carcinogenesis, organism-specific biosystem; Chemical carcinogenesis, conserved biosystem; Cholinergic synapse, organism-specific biosystem; Highly calcium permeable postsynaptic nicotinic acetylcholine receptors, organism-specific bio
Function	ATPase binding; acetylcholine binding; acetylcholine receptor activity; acetylcholine-activated cation-selective channel activity; adenylate cyclase binding; beta-amyloid binding; chloride channel regulator activity; drug binding; protein homodimerization