CHRNA4 Blocking Peptide (C-Term) Blocking Peptide

PRODUCT OVERVIEW

Product Name	CHRNA4, Blocking Peptide
Full Product Name	CHRNA4 Blocking Peptide (C-Term)
Product Gene Name	CHRNA4 blocking peptide
Product Synonym Gene Name	NACRA4
Product Synonym Names	Neuronal acetylcholine receptor subunit alpha-4; CHRNA4; NACRA4
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence is selected from aa 492-503 of HUMAN CHRNA4
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	CHRNA4 peptide (MBS9230407) is used for blocking the activity of CHRNA4 antibody (MBS9215911)
Molecular Weight	60,994 Da
OMIM	118504
Cellular Location	Cell junction, synapse, postsynaptic cell membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Cell membrane; Lipid-anchor
Related Product Information for CHRNA4 blocking peptide	After binding acetylcholine, the AChR responds by an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane permeable to sodium ions.
Other Notes	Small volumes of CHRNA4 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CHRNA4 purchase	MBS9230407 is a blocking peptide targeting CHRNA4. Also known as CHRNA4 Blocking Peptide (C-Term).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CHRNA4. It may not necessarily be applicable to this product.

NCBI GI #	1351848
NCBI GeneID	1137
NCBI Accession #	P43681.2
UniProt Primary Accession #	P43681
UniProt Secondary Accession #	Q4JGR7; Q4VAQ5; Q4VAQ6
UniProt Related Accession #	P43681
NCBI Official Full Name	Neuronal acetylcholine receptor subunit alpha-4
NCBI Official Synonym Full Names	cholinergic receptor nicotinic alpha 4 subunit
NCBI Official Symbol	CHRNA4
NCBI Official Synonym Symbols	EBN; BFNC; EBN1; NACHR; NACRA4; NACHRA4

UniProt Protein Name	Neuronal acetylcholine receptor subunit alpha-4
Protein Family	Neuronal acetylcholine receptor
UniProt Gene Name	CHRNA4
UniProt Synonym Gene Names	NACRA4
UniProt Entry Name	ACHA4_HUMAN
NCBI Protein Information	neuronal acetylcholine receptor subunit alpha-4
NCBI Summary for CHRNA4	This gene encodes a nicotinic acetylcholine receptor, which belongs to a superfamily of ligand-gated ion channels that play a role in fast signal transmission at synapses. These pentameric receptors can bind acetylcholine, which causes an extensive change in conformation that leads to the opening of an ion-conducting channel across the plasma membrane. This protein is an integral membrane receptor subunit that can interact with either nAChR beta-2 or nAChR beta-4 to form a functional receptor. Mutations in this gene cause nocturnal frontal lobe epilepsy type 1. Polymorphisms in this gene that provide protection against nicotine addiction have been described. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2012]
UniProt Comments for CHRNA4	nAChRA4: a ligand-gated ion channels that binds acetylcholine and mediates fast signal transmission at synapses. After binding acetylcholine, these pentameric receptors undergo an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane. An integral membrane receptor subunit that can interact with either nAChR beta-2 or nAChR beta-4 to form a functional receptor. Protein type: Membrane protein, integral; Membrane protein, multi-pass; Receptor, misc.; Channel, ligand-gated Chromosomal Location of Human Ortholog: 20q13.33 Cellular Component: cell soma; dendrite; external side of plasma membrane; membrane; nicotinic acetylcholine-gated receptor-channel complex; plasma membrane Molecular Function: acetylcholine binding; acetylcholine receptor activity; ligand-gated ion channel activity; nicotinic acetylcholine-activated cation-selective channel activity Biological Process: B cell activation; behavioral response to nicotine; calcium ion transport; cognition; DNA repair; membrane depolarization; neurological system process; neuromuscular synaptic transmission; regulation of action potential; regulation of dopamine secretion; regulation of inhibitory postsynaptic membrane potential; regulation of membrane potential; response to hypoxia; response to nicotine; response to oxidative stress; sensory perception of pain; signal transduction; synaptic transmission, cholinergic Disease: Epilepsy, Nocturnal Frontal Lobe, 1; Tobacco Addiction, Susceptibility To
Research Articles on CHRNA4	**1.** Common CHRNA4 variant with important regulatory properties that contributes to nicotine dependence and smoking-related consequences was identified.
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