10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CHRNA3 Rabbit pAb

Catalog # AP97800

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P32297
Other Accession	P32297
Predicted	Rat, Pig, Human, Mouse, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57480
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CHRNA3/AChRα3
Epitope Specificity	101-200/505
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the ligand-gated ion channel (TC 1.A.9)family. Acetylcholine receptor (TC 1.A.9.1) subfamily.Alpha-3/CHRNA3 sub-subfamily.
SUBUNIT	Neuronal AChR is composed of two different types ofsubunits: alpha and beta. Alpha-3 subunit can be combined to beta-2or beta-4 to give rise to functional receptors. Interacts withRIC3; which is required for proper folding and assembly.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Members of the ligand-gated ion channel receptor family are characterized by their fast transmitting response to neurotransmitters. Two important members of this family are the nicotinic acetylcholine and glutamate receptors, both of which are composed of five homologous subunits forming a transmembrane aqueous pore. These transmembrane receptors change conformation in response to their cognate neurotransmitter. Nicotinic acetylcholine receptors (AChRs) are found at the postsynaptic membrane of the neuromuscular junction and bind acetylcholine molecules, allowing ions to move through the pore. Glutamate receptors are found in the postsynaptic membrane of cells in the central nervous system. The activity that is generated at the synapse by the binding of acetylcholine is terminated by acetylcholinesterase, an enzyme that rapidly hydrolyzes acetylcholine. AChR?, also known as LNCR2, PAOD2, NACHRA3 or CHRNA3, is a 505 amino acid multi-pass membrane protein that belongs to the ligand-gated ion channel receptor family and may play a role in neurotransmission.

Additional Information

Gene ID	1136
Other Names	BAIPRCK; LNCR2; NACHRA3; PAOD2; (a)3; A730007P14Rik; Acra-3; Acra3; ACHA3_HUMAN; CHRNA3; ACHA3_MOUSE; ACHA3_RAT; cholinergic receptor

	nicotinic alpha 3 subunit; cholinergic receptor, nicotinic, alpha polypeptide 3; cholinergic receptor, nicotinic, alpha 3 (neuronal); cholinergic receptor, nicotinic alpha 3; acetylcholine receptor, nicotinic, alpha 3 (neuronal)
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	CHRNA3 (HGNC:1957)
Synonyms	NACHRA3
Function	Component of neuronal acetylcholine receptors (nAChRs) that function as pentameric, ligand-gated cation channels with high calcium permeability among other activities. nAChRs are excitatory neurotrasnmitter receptors formed by a collection of nAChR subunits known to mediate synaptic transmission in the nervous system and the neuromuscular junction. Each nAchR subunit confers differential attributes to channel properties, including activation, deactivation and desensitization kinetics, pH sensitivity, cation permeability, and binding to allosteric modulators (PubMed:31488329, PubMed:31708116). CHRNA3 forms heteropentameric neuronal acetylcholine receptors with CHRNB2 and CHRNB4, with CHRNA5, and CHRNB3 as accesory subunits (PubMed:20881005, PubMed:8663494). CHRNA3:CHRNB4 being predominant in neurons of the autonomic ganglia, it is known as ganglionic nicotinic receptor (PubMed:31488329). CHRNA3:CHRNB4 or CHRNA3:CHRNA5:CHRNB4 play also an important role in the habenulo-interpeduncular tract, modulating the mesolimbic dopamine system and affecting reward circuits and addiction (By similarity). Hypothalamic CHRNA3:CHRNB4 nAChR activation by nicotine leads to activation of POMC neurons and a decrease in food intake (By similarity). Also expressed in the urothelium where it modulates reflex bladder activity by increasing intracellular calcium through extracellular influx and basal ATP release (By similarity).
Cellular Location	Synaptic cell membrane {ECO:0000250|UniProtKB:P04757}; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum {ECO:0000250|UniProtKB:P04757}. Golgi apparatus {ECO:0000250|UniProtKB:P04757}. Note=Interaction with UBXN2A/UBXD4 promotes translocation to the plasma membrane {ECO:0000250|UniProtKB:P04757}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.