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CHRNA9 Rabbit pAb

Catalog # AP98012

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9UGM1
Other Accession	Q9UGM1
Reactivity	Rat, Mouse
Predicted	Pig, Human, Rabbit, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	54807
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CHRNA9
Epitope Specificity	51-150/479
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-9/CHRNA9 sub-subfamily.
SUBUNIT	Can form homo- or hetero-oligomeric channels in conjunction with CHRNA10. The native outer hair cell receptor may be composed of CHRNA9-CHRNA10 hetero-oligomers.
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. AChR alpha 9 is the only AChR found in cochlear hair cells. In adult rat cochlear outer hair cells (OHCs), AChR alpha 9 is expressed primarily in basal regions, where it is a component of the cholinergic receptor, while in inner hair cells (IHCs), it is expressed primarily in apical regions. The alpha 9 subunit mediates efferent synaptic transmission between cholinergic olivocochlear fibers and OHCs. One of the main functions of the AChR alpha 9 channel is to provide a pathway for calcium ion influx. AChR alpha 9 may also influence the arrival of efferent axons.

Additional Information

Gene ID	55584
Other Names	HSA243342; NACHRA9; 2410015I05Rik; Acra9; EG666827; Gm8311;

	ACHA9_HUMAN; CHRNA9; Nicotinic acetylcholine receptor subunit alpha-9 (NACHR alpha-9); ACHA9_RAT; cholinergic receptor nicotinic alpha 9 subunit; cholinergic receptor, nicotinic, alpha polypeptide 9; cholinergic receptor, nicotinic, alpha 9 (neuronal); cholinergic receptor, nicotinic alpha 9; acetylcholine receptor, nicotinic, alpha 9 (neuronal)
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	CHRNA9 (HGNC:14079)
Synonyms	NACHRA9
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:11752216, PubMed:18723036, PubMed:25282151). Forms either homopentamers or heteropentamers with CHRNA10. Expressed in the inner ear, in sympathetic neurons and in other non-neuronal cells, such as skin keratinocytes and lymphocytes (PubMed:11752216, PubMed:18723036). nAChR formed by CHRNA9:CHRNA10 mediate central nervous system control of auditory and vestibular sensory processing. The channel is permeable to a range of divalent cations including calcium, the influx of which may activate a potassium current which hyperpolarizes the cell membrane (PubMed:11752216, PubMed:25282151). In the ear, mediates synaptic transmission between efferent olivocochlear fibers and hair cells of the cochlea, this may lead to a reduction in basilar membrane motion, altering the activity of auditory nerve fibers and reducing the range of dynamic hearing. This may protect against acoustic trauma (By similarity). May also regulate keratinocyte adhesion (PubMed:11021840, PubMed:11752216, PubMed:25282151).
Cellular Location	Synaptic cell membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein
Tissue Location	Expressed in cochlea, keratinocytes, pituitary gland, B-cells and T-cells.

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