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CHRNA9 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5287

Product Information

Application	FC, WB
Primary Accession	Q9UGM1
Reactivity	Human
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	54807
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	55584
Antigen Region	8-42
Other Names	Neuronal acetylcholine receptor subunit alpha-9, Nicotinic acetylcholine receptor subunit alpha-9, NACHR alpha-9, CHRNA9, NACHRA9
Dilution	FC~~1:25 WB~~1:1000
Target/Specificity	This CHRNA9 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 8-42 amino acids from the N-terminal region of human CHRNA9.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CHRNA9 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

Background

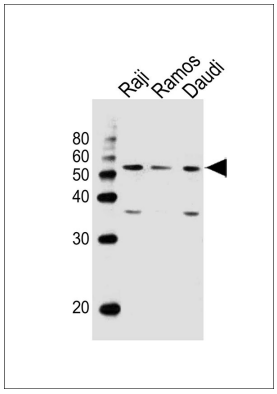
Ionotropic receptor with a probable role in the modulation of auditory stimuli. Agonist binding may induce an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane. The channel is permeable to a range of divalent cations including calcium, the influx of which may activate a potassium current which hyperpolarizes the cell membrane. In the ear, 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. May also regulate keratinocyte adhesion.

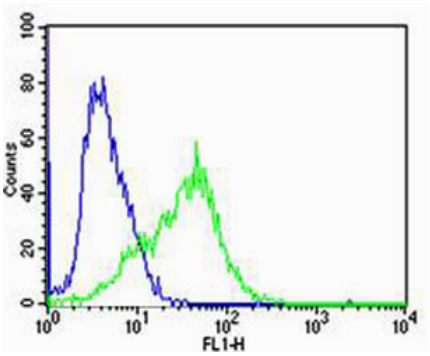
References

Sgard F.,et al.Mol. Pharmacol. 61:150-159(2002).
Lustig L.R.,et al.Cytogenet. Genome Res. 98:154-159(2002).
Hillier L.W.,et al.Nature 434:724-731(2005).
Nguyen V.T.,et al.Am. J. Pathol. 157:1377-1391(2000).
Peng H.,et al.Life Sci. 76:263-280(2004).

Images

Western blot analysis of lysates from Raji,Ramos,Daudi cell line (from left to right), using CHRNA9 Antibody (N-term)(Cat. #AW5287). AW5287 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.





Flow cytometric analysis of Jurkat cells using CHRNA9 Antibody (N-term)(green, Cat#AW5287) compared to an isotype control of rabbit IgG(blue). AW5287 was diluted at 1:25 dilution. An Alexa Fluor® 488 goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody.