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CHRNA10 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12186c

Product Information

Application	IHC-P, WB, E
Primary Accession	Q9GZZ6
Other Accession	Q9JLB5, NP_065135.2
Reactivity	Human
Predicted	Rat, Mouse, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32240
Calculated MW	49705
Antigen Region	179-206

Additional Information

Gene ID	57053
Other Names	Neuronal acetylcholine receptor subunit alpha-10, Nicotinic acetylcholine receptor subunit alpha-10, NACHR alpha-10, CHRNA10, NACHRA10
Target/Specificity	This CHRNA10 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 179-206 amino acids from the Central region of human CHRNA10.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
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	CHRNA10 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CHRNA10 (HGNC:13800)
Synonyms	NACHRA10

Function	Component of neuronal acetylcholine receptors (nAChRs) that function as pentameric, ligand-gated cation channels with high calcium permeability. nAChRs are excitatory neurotrasnmitter receptors formed by a collection of nAChR subunits. Each nAChR subunit confers differential attributes to channel properties, including activation, deactivation and desensitization kinetics, pH sensitivity, cation permeability, and binding to allosteric modulators (Probable). Forms heteropentamers with CHRNA9. Expressed in the inner ear, in sympathetic neurons and in other non-neuronal cells, such as skin keratinocytes and lymphocytes (PubMed:11752216, PubMed:15531379). nAChR formed by CHRNA9:CHRNA10 is involved in modulation of auditory stimuli. 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, 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 (PubMed:11752216). This may protect against acoustic trauma. May also regulate keratinocyte adhesion (By similarity).
Cellular Location	Synaptic cell membrane {ECO:0000250|UniProtKB:Q9JLB5}; Multi-pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:Q9JLB5}; Multi-pass membrane protein
Tissue Location	Expressed in inner-ear tissue, tonsil, immortalized B-cells, cultured T-cells and peripheral blood lymphocytes

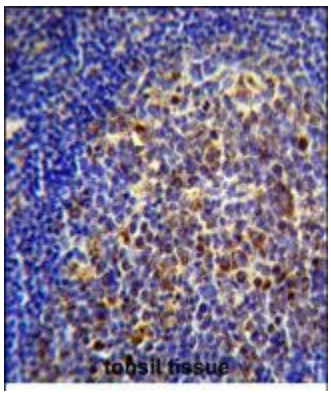
Background

CHRNA10 is an 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.

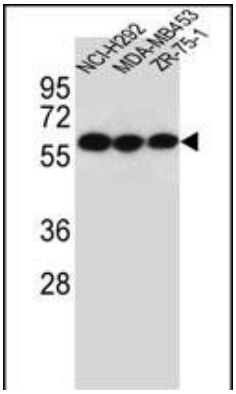
References

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Rigbi, A., et al. Pharmacogenomics J. (2010) In press :
Need, A.C., et al. Eur. J. Hum. Genet. 17(7):946-957(2009)
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Images



CHRNA10 Antibody (Center) (Cat. #AP12186c)immunohistochemistry analysis in formalin fixed and paraffin embedded human tonsil tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of CHRNA10 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



CHRNA10 Antibody (Center) (Cat. #AP12186c) western blot analysis in NCI-H292,MDA-MB453,ZR-75-1 cell line lysates (35ug/lane).This demonstrates the CHRNA10 antibody detected the CHRNA10 protein (arrow).

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