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

CHRNA5 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14006c

Product Information

Application	WB, E
Primary Accession	P30532
Other Accession	Q8SPU7, NP_000736.2
Reactivity	Human, Mouse
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33909
Calculated MW	53054
Antigen Region	187-216

Additional Information

Gene ID	1138
Other Names	Neuronal acetylcholine receptor subunit alpha-5, CHRNA5, NACHRA5
Target/Specificity	This CHRNA5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 187-216 amino acids from the Central region of human CHRNA5.
Dilution	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	CHRNA5 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CHRNA5 (HGNC:1959)
Synonyms	NACHRA5
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:20881005, PubMed:8663494). Has an accessory rather than functional role and is only able to form functional nAChRs when co-assembled with another beta subunit (PubMed:20881005, PubMed:8663494). Participates in pentameric assemblies along with CHRNA3, CHRNA4, CHRNB2 and CHRNB4 (PubMed:20881005, PubMed:8663494). Increases receptor sensitivity to acetylcholine and nicotine when associated with CHRNA4 and CHRNB2 (PubMed:8663494). Plays a role in nicotine addiction (PubMed:20881005).

Cellular Location

Synaptic cell membrane {ECO:0000250|UniProtKB:P32297}; Multi-pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:P32297}; Multi-pass membrane protein

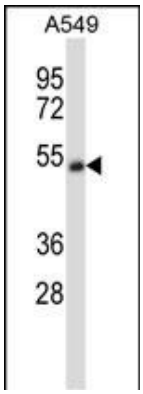
Background

The protein encoded by this gene is a nicotinic acetylcholine receptor subunit and a member of a superfamily of ligand-gated ion channels that mediate fast signal transmission at synapses. These receptors are thought to be heteropentamers composed of separate but similar subunits. Defects in this gene have been linked to susceptibility to lung cancer type 2 (LNCR2).

References

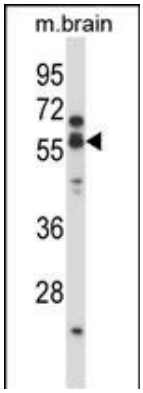
Wessel, J., et al. Neuropsychopharmacology 35(12):2392-2402(2010)
Erlich, P.M., et al. Hum. Genet. 128(5):491-499(2010)
Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)
Falvella, F.S., et al. J. Natl. Cancer Inst. 102(17):1366-1370(2010)
Li, M.D., et al. PLoS ONE 5 (8), E12183 (2010) :

Images



CHRNA5 Antibody (Center) (Cat. #AP14006c) western blot analysis in A549 cell line lysates (35ug/lane).This demonstrates the CHRNA5 antibody detected the CHRNA5 protein (arrow).

CHRNA5 Antibody (Center) (Cat. #AP14006c) western blot analysis in mouse brain tissue lysates (35ug/lane).This demonstrates the CHRNA5 antibody detected the CHRNA5 protein (arrow).



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