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

CHRNA4 Antibody (N-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21830a

Product Information

Application	WB, E
Primary Accession	P43681
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB53684
Calculated MW	69957

Additional Information

Gene ID	1137
Other Names	Neuronal acetylcholine receptor subunit alpha-4, CHRNA4, NACRA4
Target/Specificity	This CHRNA4 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 176-208 amino acids from human CHRNA4.
Dilution	WB~~1:2000 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	CHRNA4 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CHRNA4 (HGNC:1958)
Synonyms	NACRA4
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:22361591, PubMed:27698419, PubMed:29720657, PubMed:38454578). CHRNA4 forms heteropentameric neuronal acetylcholine receptors with CHRNB2 and CHRNB4, as well as CHRNA5 and CHRNB3 as accesory subunits. Is the most abundant nAChR subtype expressed in the central nervous system (PubMed:16835356, PubMed:22361591, PubMed:27698419, PubMed:29720657, PubMed:38454578). Found in two major stoichiometric forms,(CHRNA4)3:(CHRNB2)2 and (CHRNA4)2:(CHRNB2)3, the two stoichiometric forms differ in their unitary conductance, calcium permeability, ACh sensitivity and potentiation by divalent cation (PubMed:27698419, PubMed:29720657, PubMed:38454578). Involved in the modulation of calcium-dependent signaling pathways, influences the release of neurotransmitters, including dopamine, glutamate and GABA (By similarity).

Cellular Location

Synaptic cell membrane {ECO:0000250|UniProtKB:O70174}; Multi-pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:O70174}; Multi-pass membrane protein

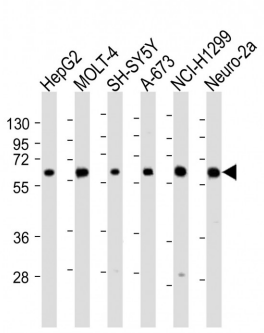
Background

After binding acetylcholine, the AChR responds by an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane permeable to sodium ions.

References

Monteggia L.M.,et al.Gene 155:189-193(1995).
Steinlein O.K.,et al.Genomics 32:289-294(1996).
Elliott K.J.,et al.J. Mol. Neurosci. 7:217-228(1996).
Groot Kormelink P.J.,et al.FEBS Lett. 400:309-314(1997).
Deloukas P.,et al.Nature 414:865-871(2001).

Images



All lanes : Anti-CHRNA4 Antibody (N-Term) at 1:2000 dilution Lane 1: HepG2 whole cell lysate Lane 2: MOLT-4 whole cell lysate Lane 3: SH-SY5Y whole cell lysate Lane 4: A-673 whole cell lysate Lane 5: NCI-H1299 whole cell lysate Lane 6: Neuro-2a whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 70 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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