OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA328883

Chrna3 Rabbit Polyclonal Antibody

Product data:

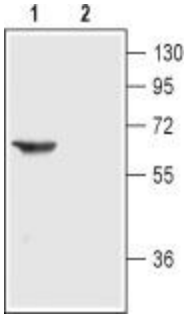
Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)KWKPSDYQGVEFMR, corresponding to amino acid residues 91-104 of rat nAChRa3. Extracellular, N-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	cholinergic receptor nicotinic alpha 3 subunit
Database Link:	NP_434692 Entrez Gene 110834 MouseEntrez Gene 25101 Rat

View online »

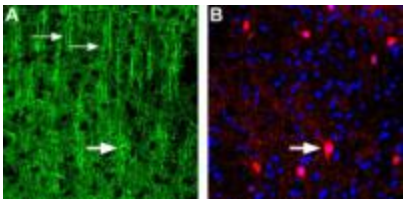
Background: Acetylcholine, released by cholinergic neurons, activates two groups of acetylcholine receptors (AChRs); muscarinic AChRs (mAChRs) which belong to the superfamily of G-protein coupled receptors (GPCRs) and nicotinic AChRs (nAChRs) which belong to the ligand-gated ion channel superfamily. nAChRs also respond to nicotine, hence their name.To date, 17 different but related subunits of nAChRs have been identified and cloned. They consist of a subunits (a1-10), which is responsible for the binding of ligands. In fact, this subunit includes a Cys-loop in the first extracellular domain that is required for agonist binding. The other subunits responsible for making up the active receptor are the Ã? (Ã?1-4), ?, d and e subunits3. Structurally, all subunits have the following: a conserved large extracellular N-terminal domain, 3 conserved transmembrane domains, a variable cytoplasmic loop and a fourth transmembrane domain with a short extracellular C-terminal domain. An active nAChR is generally a heteropentamer of these various subunits organized around a central pore.All a subunits are expressed in neuronal cells except for the a1 subunit which is specifically expressed in the muscle. In the peripheral autonomic nervous system, nicotinic receptors are prominent and are responsible mediating fast synaptic transmission in all peripheral autonomic ganglia. In this system, these channel receptors are mostly made up of two a3 subunits heteromerized with three other subunits. The a3 subunit plays a most important role in this system as knockout mice suffer from severe autonomic failure accompanied by gastrointestinal and bladder malfunctions.Autoimmune autonomic ganglionopathy (AAG) is a neurological disorder characterized by dysfunctions in sympathetic, parasympathetic and enteric functions. Patients suffering from the disease express high levels of self antibodies against ionotropic nicotinic receptors, namely a3 subunits4. The a3 subunit is also found in dorsal root ganglion where it is most probably involved in nociception.

Synonyms: LNCR2; MGC104879; NACHRA3; PAOD2

Product images:



Western blot analysis of rat brain membranes: 1. Anti-Nicotinic Acetylcholine Receptor a3 (extracellular) antibody, (1:200). 2. Anti-Nicotinic Acetylcholine Receptor a3 (extracellular) antibody, preincubated with the control peptide antigen.



IHC staining of immersion-fixed, free floating rat brain frozen sections were stained using Anti-Nicotinic Acetylcholine Receptor a3 (extracellular) antibody, (1:200). A. Intense staining (green) of Nicotinic Acetylcholine Receptor a3 appears in apical dendrites (thin arrows). A few cortical interneurons (thick arrow) are also stained with the antibody. B. The same section was stained also for parvalbumin (red staining). An arrow depicts a neuron expressing both nAChRa3 and parvalbumin.