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Product datasheet for TA328882

Chrna2 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)DLEQMERTVDLKD, corresponding to amino acid residues 189-201 of rat nAChRa2. 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, 0.05% 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 2 subunit
Database Link:	NP_596911 Entrez Gene 1135 HumanEntrez Gene 110902 MouseEntrez Gene 170945 Rat P12389

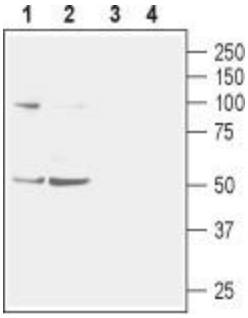
View online »

Background: Nicotinic Acetylcholine Receptors (nAChRs) mediate the physiological effects of exogenous nicotine. They also play critical physiological roles throughout the brain and body by mediating cholinergic excitatory neurotransmission, modulating the release of neurotransmitters, and have longer-term effects on gene expression and cellular connections.nAChRs are pentameric complexes made up of combinations of a number of different nAChR subunits, which can be classified as a subunits, containing two cysteine residues at positions analogous to Cys192 and Cys193, and non-alpha subunits (â?? structuralâ?? subunits), which can be defined as Ã? subunits when they are expressed in the vertebrate nervous system. There are nine a subunits (a2â??a10) and three Ã? subunits (Ã?2, Ã?3, and Ã?4) in the CNS. Nicotinic receptors are assembled as combinations of a (2-6) and and Ã? (2-4) subunits. All a subunits are expressed in neuronal cells except for the a1 subunit which is specifically expressed in skeletal muscle. They are also expressed in non-neuronal cells such as bronchial epithelial cells, as well lymphocytes.In humans, a mutant a2 subunit has been identified, which forms nAChRs with increased agonist sensitivity and causes a form of familial epilepsy6. Further, an a2 subunit mouse model has been used to demonstrate a role for a2 nAChR in nicotine-induced modulation of long-term potentiation in the mouse hippocampal CA1 region, which may underlie some of the cognitive effects of nicotine.

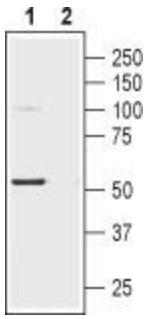
Synonyms: OTTHUMP00000128276

Note: This antibody was tested in live cell imaging. Please see IF/ICC data for detail.

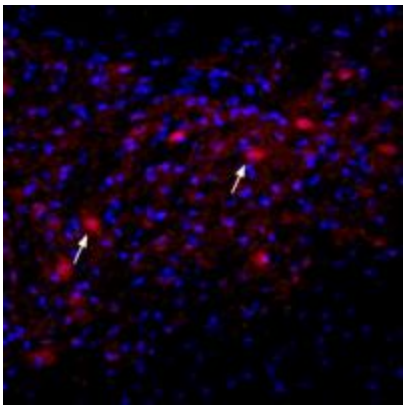
Product images:



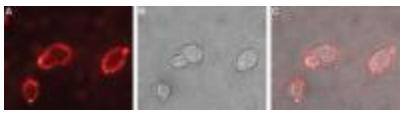
Western blot analysis of mouse (lanes 1 and 3) and rat (lanes 2 and 4) brain membranes: 1-2. Anti-Nicotinic Acetylcholine Receptor a2 (extracellular) antibody, (1:400). 3-4. Anti-Nicotinic Acetylcholine Receptor a2 (extracellular) antibody, preincubated with the control peptide antigen.



Western blot analysis of human SH-SY5Y neuroblastoma cell lysate: 1. Anti-Nicotinic Acetylcholine Receptor a2 (extracellular) antibody, (1:200). 2. Anti-Nicotinic Acetylcholine Receptor a2 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of nAChRa2 in rat deep cerebellar nucleus. Immunohistochemical staining of immersion-fixed, free floating rat brain frozen sections using Anti-Nicotinic Acetylcholine Receptor a2 (extracellular) antibody, (1:100). Staining reveals expression of nAChRa2 (red) in cells with neuronal outline (arrows point at some examples) in the red nucleus. DAPI is used as the counterstain (blue).



Expression of Nicotinic Acetylcholine Receptor a2 in rat PC12 pheochromocytoma cells. Immunocytochemical staining of live intact rat PC12 pheochromocytoma cells. A. Extracellular staining of live cells with Anti-Nicotinic Acetylcholine Receptor a2 (extracellular) antibody, (1:50), followed by goat anti-rabbit-AlexaFluor-594 (red). B. Live image of the cells. C. Merge of the two images.