Datasheet for ABIN5611363

anti-CHRNA7 antibody (AA 52-259)

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Overview

Quantity:	0.1 mg
Target:	CHRNA7
Binding Specificity:	AA 52-259
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Flow Cytometry (FACS), Immunocytochemistry (ICC), Neutralization (Neut)

Product Details

Immunogen:	Purified recombinant fragment of human CHRNA7 (AA: extra 52-259) expressed in E. coli.
Clone:	7F10G1
Isotype:	IgG1
Purification:	purified

Target Details

Target:	CHRNA7
Alternative Name:	CHRNA7 (CHRNA7 Products)
Background:	Description: The nicotinic acetylcholine receptors (nAChRs) are members of a superfamily of ligand-gated ion channels that mediate fast signal transmission at synapses. The nAChRs are thought to be hetero-pentamers composed of homologous subunits. The proposed structure

Target Details

	for each subunit is a conserved N-terminal extracellular domain followed by three conserved transmembrane domains, a variable cytoplasmic loop, a fourth conserved transmembrane domain, and a short C-terminal extracellular region. The protein encoded by this gene forms a homo-oligomeric channel, displays marked permeability to calcium ions and is a major component of brain nicotinic receptors that are blocked by, and highly sensitive to, alpha-bungarotoxin. Once this receptor binds acetylcholine, it undergoes an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane. This gene is located in a region identified as a major susceptibility locus for juvenile myoclonic epilepsy and a chromosomal location involved in the genetic transmission of schizophrenia. An evolutionarily recent partial duplication event in this region results in a hybrid containing sequence from this gene and a novel FAM7A gene. Alternative splicing results in multiple transcript variants. Aliases: NACHRA7, CHRNA7-2
Molecular Weight:	56.4 kDa
Gene ID:	1139
HGNC:	1139
Pathways:	Synaptic Membrane

Application Details

Application Notes:	ELISA: 1:10000, WB: 1:500 - 1:2000, ICC: N/A, FCM: 1:200 - 1:400, IHC: 1:200 - 1:1000
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Purified antibody in PBS with 0.05 % sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C/-20 °C
Storage Comment:	4°C, -20°C for long term storage

Publications

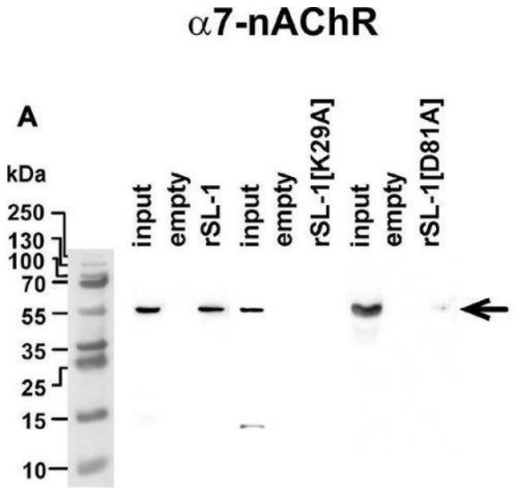
Product cited in:

Bychkov, Kirichenko, Mikhaylova, Paramonov, Kirpichnikov, Shulepko, Lyukmanova: " Extracellular Vesicles Derived from Metastatic Melanoma Cells Transfer α7-nAChR mRNA, Thus Increasing the Surface Expression of the Receptor and Stimulating the Growth of Normal Keratinocytes." in: **Acta naturae**, Vol. 14, Issue 3, pp. 95-99, (2022) (PubMed).

Bychkov, Shulepko, Shlepova, Kulbatskii, Chulina, Paramonov, Baidakova, Azev, Koshelev, Kirpichnikov, Shenkarev, Lyukmanova: "SLURP-1 Controls Growth and Migration of Lung Adenocarcinoma Cells, Forming a Complex With α7-nAChR and PDGFR/EGFR Heterodimer." in: **Frontiers in cell and developmental biology**, Vol. 9, pp. 739391, (2021) (PubMed).

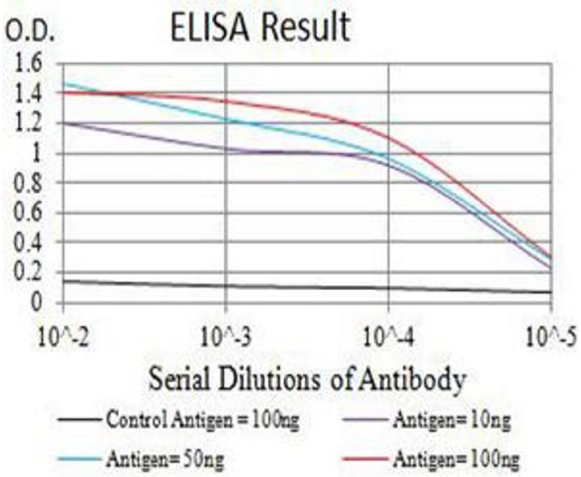
Kulbatskii, Shenkarev, Bychkov, Loktyushov, Shulepko, Koshelev, Povarov, Popov, Peigneur, Chugunov, Kozlov, Sharonova, Efremov, Skrebitsky, Tytgat, Kirpichnikov, Lyukmanova: "Human Three-Finger Protein Lypd6 Is a Negative Modulator of the Cholinergic System in the Brain." in: **Frontiers in cell and developmental biology**, Vol. 9, pp. 662227, (2021) (PubMed).

Images



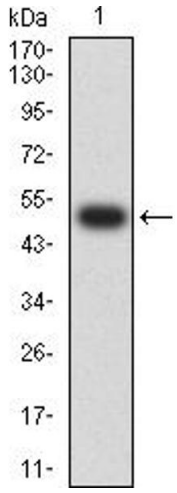
Western Blotting

Image 1. Analysis of rSLURP-1 targets in A549 cells. NHS-Sepharose coupled with rSLURP-1 or rSLURP-1[K29A] and rSLURP-1[D81A] mutants was incubated with a membrane fraction of A549 cells and extracted proteins were analyzed by Western blotting using antibodies against alpha7-nAChR Source: PMID34595181



ELISA

Image 2. Black line: Control Antigen (100 ng),Purple line: Antigen (10 ng), Blue line: Antigen (50 ng), Red line:Antigen (100 ng)



Western Blotting

Image 3. Western blot analysis using CHRNA7 mAb against human CHRNA7 (AA: extra 52-259) recombinant protein. (Expected MW is 50.4 kDa)

Please check the product details page for more images. Overall 7 images are available for ABIN5611363.