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CHRNA3

Purified Mouse Monoclonal Antibody
Catalog # AO2561a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P32297
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6D3A10
Isotype	Mouse IgG1
Calculated MW	57480
Immunogen	Purified recombinant fragment of human CHRNA3 (AA: 32-240) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	1136
Other Names	LNCR2; PAOD2; NACHRA3
Dilution	WB~~ 1/500 - 1/2000 IHC~~1:100~500 ICC~~ 1/200 - 1/1000 E~~ 1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CHRNA3 is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CHRNA3 (HGNC:1957)
Synonyms	NACHRA3
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:31488329, PubMed:31708116). CHRNA3 forms heteropentameric neuronal acetylcholine receptors with CHRNB2 and CHRNB4, with CHRNA5, and CHRNB3 as accesory subunits (PubMed:20881005, PubMed:8663494). CHRNA3:CHRNB4 being predominant in neurons of the autonomic ganglia, it is known as ganglionic nicotinic receptor (PubMed:31488329). CHRNA3:CHRNB4 or CHRNA3:CHRNA5:CHRNB4 play also an important role in the habenulo-interpeduncular tract, modulating the mesolimbic dopamine system and affecting reward circuits and addiction (By similarity). Hypothalamic CHRNA3:CHRNB4 nAChR activation by nicotine leads to activation of POMC neurons and a decrease in food intake (By similarity). Also expressed in the urothelium where it modulates reflex bladder activity by increasing intracellular calcium through extracellular influx and basal ATP release (By similarity).

Cellular Location

Synaptic cell membrane {ECO:0000250|UniProtKB:P04757}; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum {ECO:0000250|UniProtKB:P04757}. Golgi apparatus {ECO:0000250|UniProtKB:P04757}. Note=Interaction with UBXN2A/UBXD4 promotes translocation to the plasma membrane {ECO:0000250|UniProtKB:P04757}

References

1.Tumour Biol. 2015 Jul;36(7):4987-92.2.Int J Mol Sci. 2014 Mar 28;15(4):5446-57.

Images

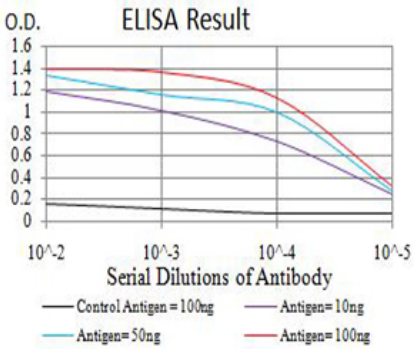


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

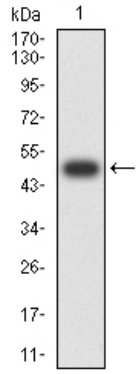
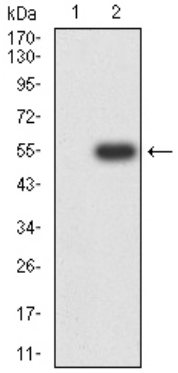


Figure 2:Western blot analysis using CHRNA3 mAb against human CHRNA3 (AA: 32-240) recombinant protein. (Expected MW is 50.6 kDa)

Figure 3:Western blot analysis using CHRNA3 mAb against HEK293 (1) and CHRNA3 (AA: 32-240)-hIgGFc transfected HEK293 (2) cell lysate.



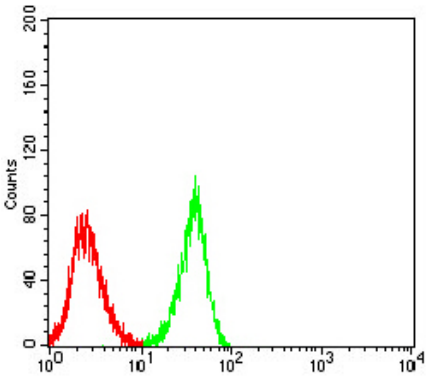


Figure 6:Flow cytometric analysis of SH-SY5Y cells using CHRNA3 mouse mAb (green) and negative control (red).

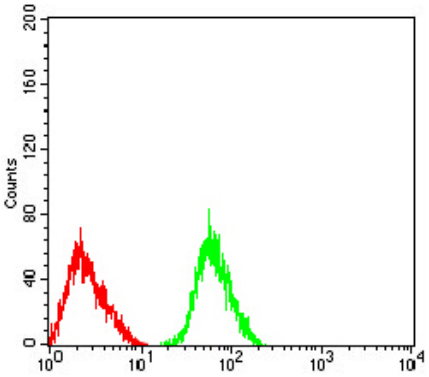


Figure 7:Flow cytometric analysis of SK-N-SH cells using CHRNA3 mouse mAb (green) and negative control (red).

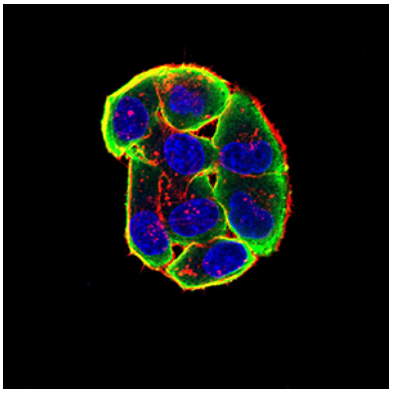
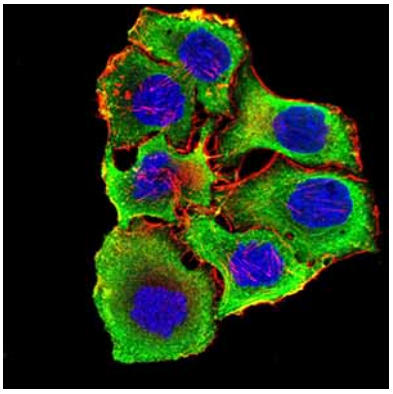


Figure 4:Immunofluorescence analysis of Hela cells using CHRNA3 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher (Cat#: 35503)

Figure 5:Immunofluorescence analysis of SMMC-7721 cells using CHRNA3 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher (Cat#: 35503)



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