

CHRNA3
Purified Mouse Monoclonal Antibody
Catalog # AO2561a**Specification****CHRNA3 - Product Information**

Application	WB, IHC, ICC, E
Primary Accession	P32297
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	57.5kDa KDa

Immunogen

Purified recombinant fragment of human CHRNa3 (AA: 32-240) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

CHRNA3 - 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.

CHRNA3 - 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 neurotransmitter 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 accessory 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

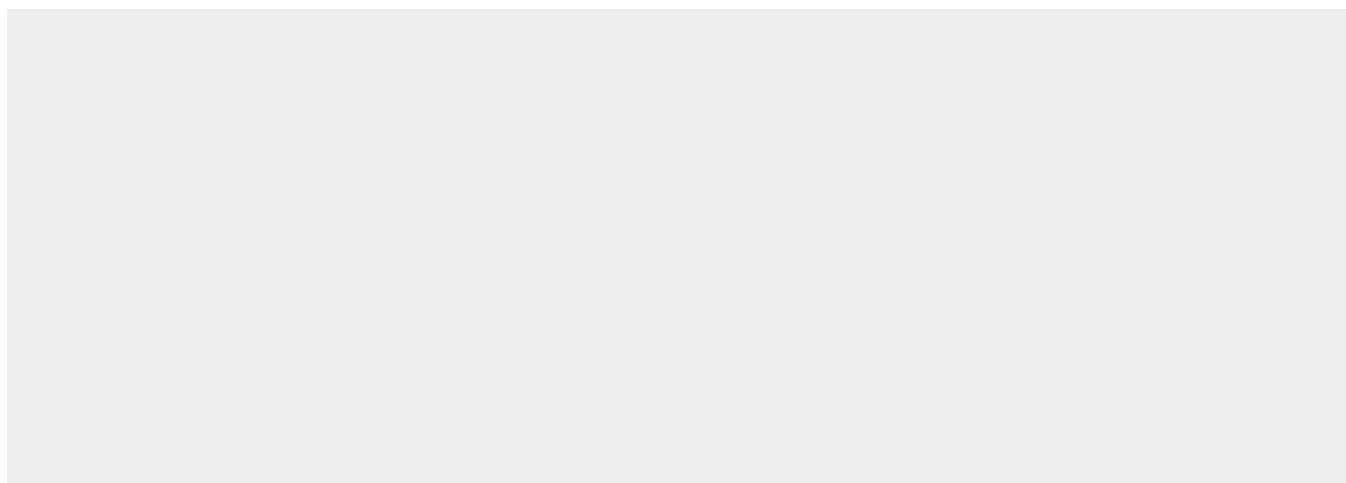
Synaptic cell membrane {ECO:0000250|UniProtKB:P04757}; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum {ECO:0000250|UniProtKB:P04757}. Golgi apparatus {ECO:0000250|UniProtKB:P04757}. Note=Interaction with UBXN2A/UBXD4 promotes translocation to the plasma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

CHRNA3 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CHRNA3 - Images



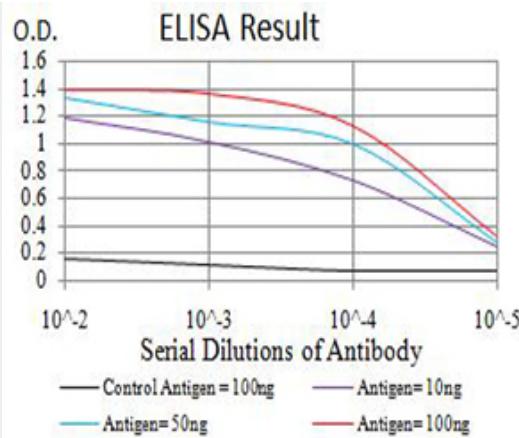


Figure 1: Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)

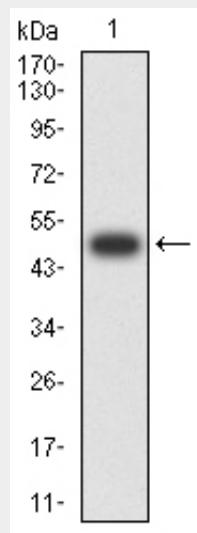


Figure 2: Western blot analysis using CHRNA3 mAb against human CHRNA3 (AA: 32-240) recombinant protein. (Expected MW is 50.6 kDa)

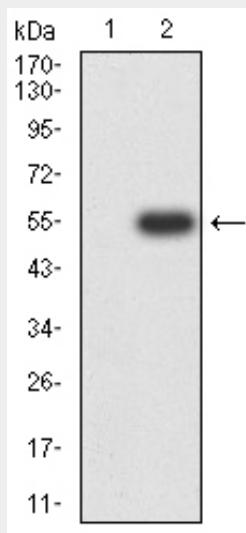


Figure 3: Western blot analysis using CHRNA3 mAb against HEK293 (1) and CHRNA3 (AA: 32-240)-hIgFc transfected HEK293 (2) cell lysate.

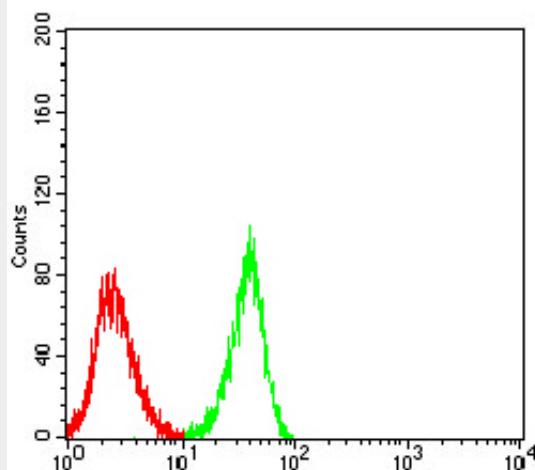


Figure 6:Flow cytometric analysis of SH-SY5Y cells using CHRNA3 mouse mAb (green) and negative control (red).

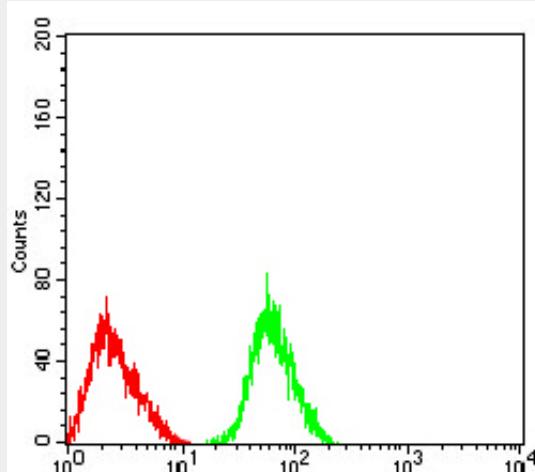


Figure 7:Flow cytometric analysis of SK-N-SH cells using CHRNA3 mouse mAb (green) and negative control (red).

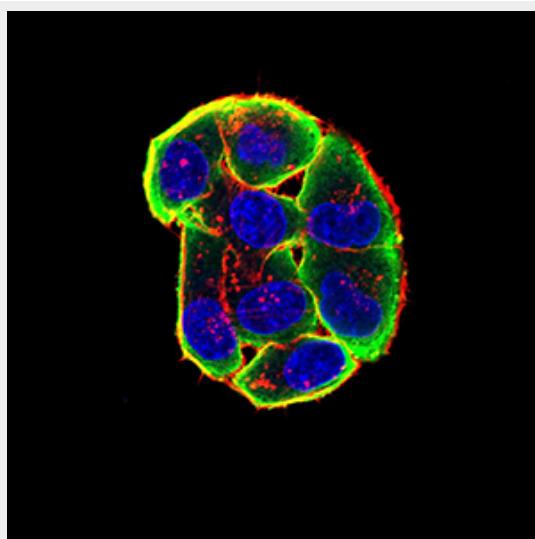


Figure 4:Immunofluorescence analysis of HeLa cells using CHRNA3 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555

phalloidin. Secondary antibody from Fisher (Cat#: 35503)

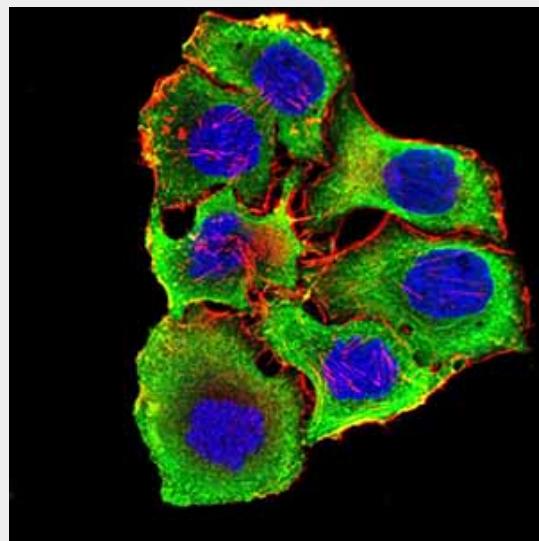


Figure 5: Immunofluorescence analysis of SMMC-7721 cells using CHRNA3 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher (Cat#: 35503)

CHRNA3 - References

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