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CHRNB4

Purified Mouse Monoclonal Antibody
Catalog # AO2641a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P30926
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1H11F2
Isotype	Mouse IgG1
Calculated MW	56380
Immunogen	Purified recombinant fragment of human CHRNB4 (AA: extra 22-236) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	1143
Other Names	Neuronal acetylcholine receptor subunit beta-4, CHRNB4
Dilution	WB~~ 1/500 - 1/2000 IHC~~1:100~500 ICC~~ 1/100 - 1/500 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	CHRNB4 is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CHRNB4 (HGNC:1964)
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:20881005, PubMed:31488329, PubMed:8663494, PubMed:8906617, PubMed:9203638).

CHRNB4 forms heteropentameric neuronal acetylcholine receptors with CHRNA2, CHRNA3 and CHRNA4, as well as CHRNA5 and CHRNB3 as accesory subunits (PubMed:11118490, 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).

Cellular Location

Synaptic cell membrane {ECO:0000250|UniProtKB:P04757}; Multi-pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:P04757}; Multi-pass membrane protein

References

1.Lung Cancer. 2014 Oct;86(1):85-90. 2.PLoS One. 2014 May 7;9(5):e96753.

Images

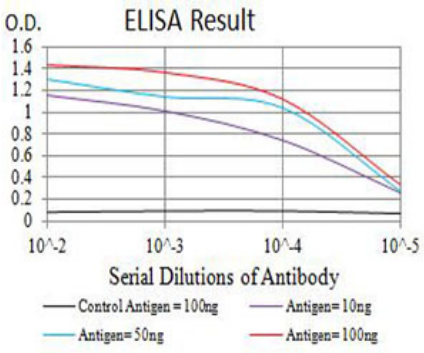


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

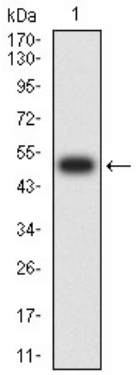
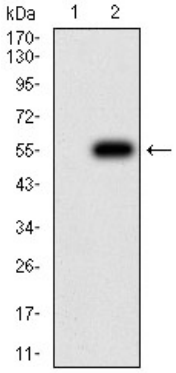


Figure 2:Western blot analysis using CHRNB4 mAb against human CHRNB4 (AA: extra 22-236) recombinant protein. (Expected MW is 51 kDa)

Figure 3:Western blot analysis using CHRNB4 mAb against HEK293 (1) and CHRNB4 (AA: extra 22-236)-hIgGFc transfected HEK293 (2) cell lysate.



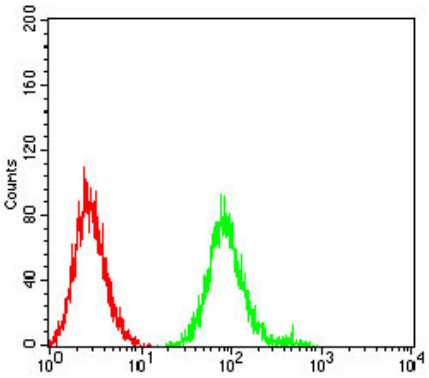


Figure 5:Flow cytometric analysis of SK-N-SH cells using CHRNB4 mouse mAb (green) and negative control (red).

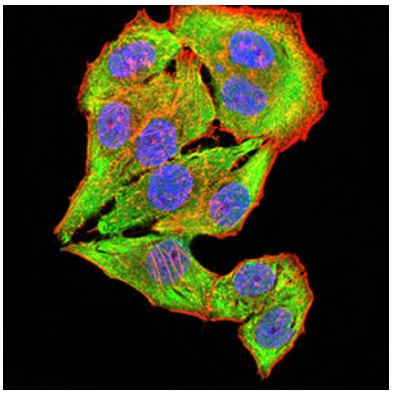


Figure 4:Immunofluorescence analysis of Hela cells using CHRNB4 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher (Cat#: 35503)