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CHRNB2

Purified Mouse Monoclonal Antibody
Catalog # AO2598a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P17787
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2D12A2
Isotype	Mouse IgG2a
Calculated MW	57019
Immunogen	Purified recombinant fragment of human CHRNB2 (AA: extra 26-233) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	1141
Other Names	EFNL3; nAChRB2
Dilution	WB~~ 1/500 - 1/2000 IHC~~1:100~500 ICC~~N/A 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	CHRNB2 is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CHRNB2 (HGNC:1962)
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:22361591, PubMed:27698419, PubMed:29720657, PubMed:38454578). CHRNB2 forms

heteropentameric neuronal acetylcholine receptors with CHRNA2, CHRNA3, CHRNA4 and CHRNA6, as well as CHRNA5 and CHRNB3 as accesory subunits (PubMed:16835356, PubMed:20881005, PubMed:22361591, PubMed:27698419, PubMed:29720657, PubMed:38454578, PubMed:8663494). Found in two major stoichiometric forms,(CHRNA4)3:(CHRNB2)2 and (CHRNA4)2:(CHRNB2)3, the two stoichiometric forms differ in their unitary conductance, calcium permeability, ACh sensitivity and potentiation by divalent cation (PubMed:27698419, PubMed:29720657, PubMed:38454578). Heteropentameric channels with CHRNA6 and CHRNA4 exhibit high sensitivity to ACh and nicotine and are predominantly expressed in only a few brain areas, including dopaminergic neurons, norepirephrine neurons and cells of the visual system. nAChrs containing CHRNA6 subunits mediate endogenous cholinergic modulation of dopamine and gamma-aminobutyric acid (GABA) release in response to nicotine at nerve terminals (By similarity). Also forms functional nAChRs with other subunits such as CHRNA7:CHRNB2, mainly expressed in basal forebrain cholinergic neurons (PubMed:33239400, PubMed:38161283).

Cellular Location

Synaptic cell membrane {ECO:0000250|UniProtKB:P12390}; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein

References

1.Prog Neuropsychopharmacol Biol Psychiatry. 2015 Jun 3;59:84-90.2.Cancer Epidemiol Biomarkers Prev. 2009 Oct;18(10):2608-12.

Images

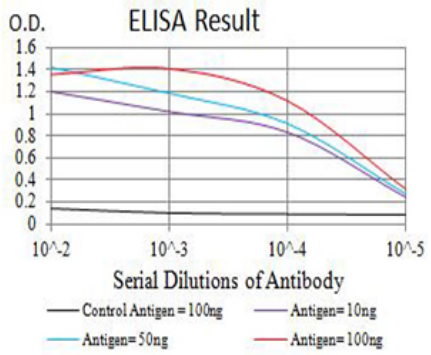


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

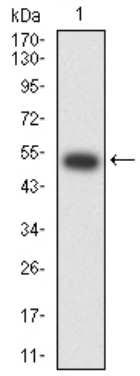
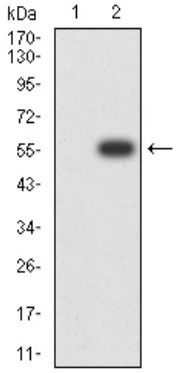


Figure 2:Western blot analysis using CHRNB2 mAb against human CHRNB2 (AA: extra 26-233) recombinant protein. (Expected MW is 51 kDa)

Figure 3:Western blot analysis using CHRNB2 mAb against HEK293 (1) and CHRNB2 (AA: extra 26-233)-hIgGFc transfected HEK293 (2) cell lysate.



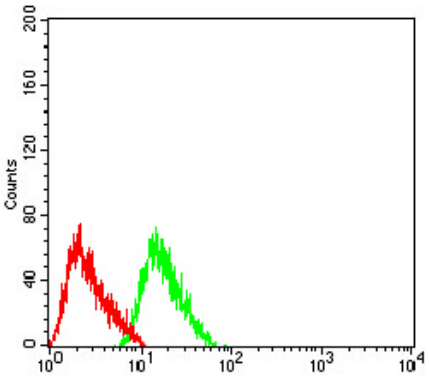


Figure 4:Flow cytometric analysis of SH-SY5Y cells using CHRNB2 mouse mAb (green) and negative control (red).