

# CHRNA2

Purified Mouse Monoclonal Antibody

Catalog # AO2598a

## Product Information

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<b>Application</b>	WB, IHC, ICC, E
<b>Primary Accession</b>	<a href="#">P17787</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	2D12A2
<b>Isotype</b>	Mouse IgG2a
<b>Calculated MW</b>	57019
<b>Immunogen</b>	Purified recombinant fragment of human CHRNA2 (AA: extra 26-233) expressed in E. Coli.
<b>Formulation</b>	Purified antibody in PBS with 0.05% sodium azide

## Additional Information

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<b>Gene ID</b>	1141
<b>Other Names</b>	EFNL3; nAChRB2
<b>Dilution</b>	WB~~ 1/500 - 1/2000 IHC~~1:100~500 ICC~~N/A E~~ 1/10000
<b>Storage</b>	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.
<b>Precautions</b>	CHRNA2 is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CHRNA2 ( <a href="#">HGNC:1962</a> )
<b>Function</b>	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: <a href="#">22361591</a> , PubMed: <a href="#">27698419</a> , PubMed: <a href="#">29720657</a> , PubMed: <a href="#">38454578</a> ). CHRNA2 forms

heteropentameric neuronal acetylcholine receptors with CHRNA2, CHRNA3, CHRNA4 and CHRNA6, as well as CHRNA5 and CHRNB3 as accessory subunits (PubMed:[16835356](#), PubMed:[20881005](#), PubMed:[22361591](#), PubMed:[27698419](#), PubMed:[29720657](#), PubMed:[38454578](#), PubMed:[8663494](#)). Found in two major stoichiometric forms, (CHRNA4)<sub>3</sub>:(CHRNB2)<sub>2</sub> and (CHRNA4)<sub>2</sub>:(CHRNB2)<sub>3</sub>, 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, norepinephrine 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

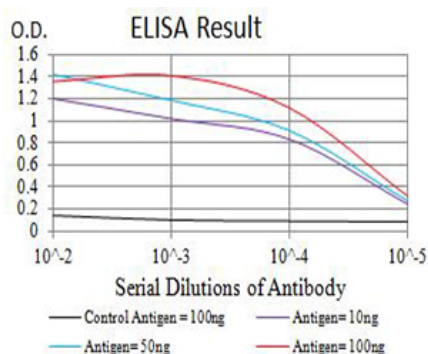


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

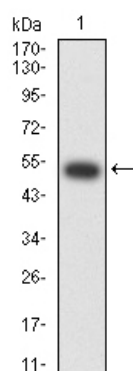


Figure 2:Western blot analysis using CHRNB2 mAb against human CHRNB2 (AA: extra 26-233) recombinant protein. (Expected MW is 51 kDa)

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

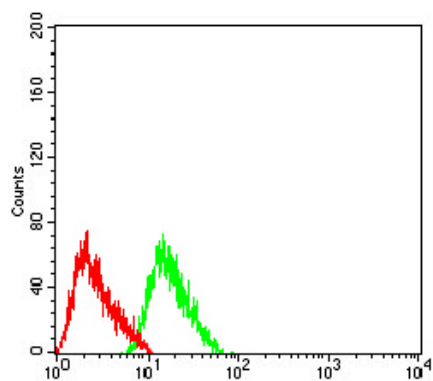
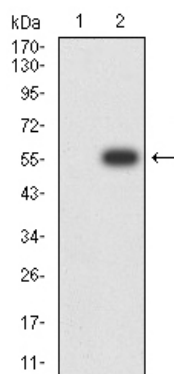


Figure 4:Flow cytometric analysis of SH-SY5Y cells using CHRNA2 mouse mAb (green) and negative control (red).

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