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CHRNA4

Purified Mouse Monoclonal Antibody
Catalog # AO2581a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P43681
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	7B4H1
Isotype	Mouse IgG1
Calculated MW	69957
Immunogen	Purified recombinant fragment of human CHRNA4 (AA: extra 29-242) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	1137
Other Names	EBN; BFNC; EBN1; NACHR; NACRA4; NACHRA4
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	CHRNA4 is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CHRNA4 (HGNC:1958)
Synonyms	NACRA4
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). CHRNA4 forms heteropentameric neuronal acetylcholine receptors with CHRNB2 and CHRNB4, as well as CHRNA5 and CHRNB3 as accesory subunits. Is the most abundant nAChR subtype expressed in the central nervous system (PubMed:16835356, PubMed:22361591, PubMed:27698419, PubMed:29720657, PubMed:38454578). 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). Involved in the modulation of calcium-dependent signaling pathways, influences the release of neurotransmitters, including dopamine, glutamate and GABA (By similarity).

Cellular Location

Synaptic cell membrane {ECO:0000250|UniProtKB:O70174}; Multi-pass membrane protein. Cell membrane {ECO:0000250|UniProtKB:O70174}; Multi-pass membrane protein

References

1.Epilepsy Res. 2014 Dec;108(10):1927-31.2.J Pharmacol Exp Ther. 2014 Mar;348(3):410-20.

Images

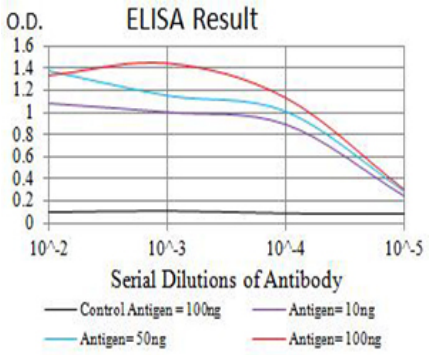


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

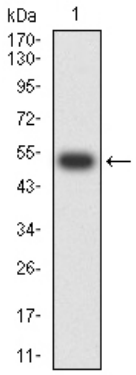
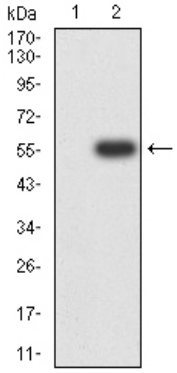


Figure 2:Western blot analysis using CHRNA4 mAb against human CHRNA4 (AA: 29-242) recombinant protein. (Expected MW is 52.5 kDa)

Figure 3:Western blot analysis using CHRNA4 mAb against HEK293 (1) and CHRNA4 (AA: 29-242)-hIgGFc transfected HEK293 (2) cell lysate.



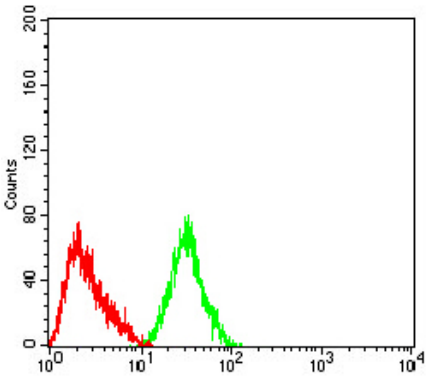


Figure 4:Western blot analysis using CHRNA4 mouse mAb against SH-SY5Y (1) cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.