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CHRNA4
Purified Mouse Monoclonal Antibody
Catalog # AO2581a

Specification

CHRNA4 - Product Information

Application	**WB, IHC, ICC, E**
Primary Accession	P43681
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**70kDa KDa**

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

CHRNA4 - 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.

CHRNA4 - 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

CHRNA4 - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CHRNA4 - Images

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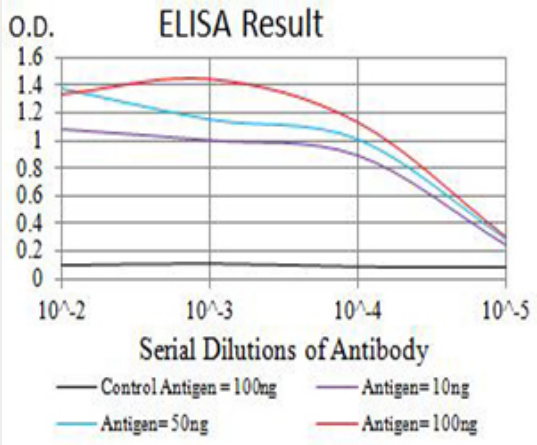

Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

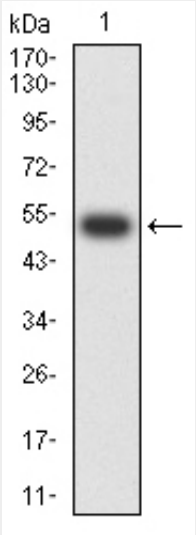

Figure 2:Western blot analysis using CHRNA4 mAb against human CHRNA4 (AA: 29-242) recombinant protein. (Expected MW is 52.5 kDa)

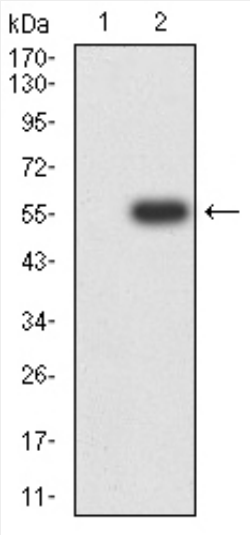

Figure 3:Western blot analysis using CHRNA4 mAb against HEK293 (1) and CHRNA4 (AA: 29-242)-hIgGFc transfected HEK293 (2) cell lysate.

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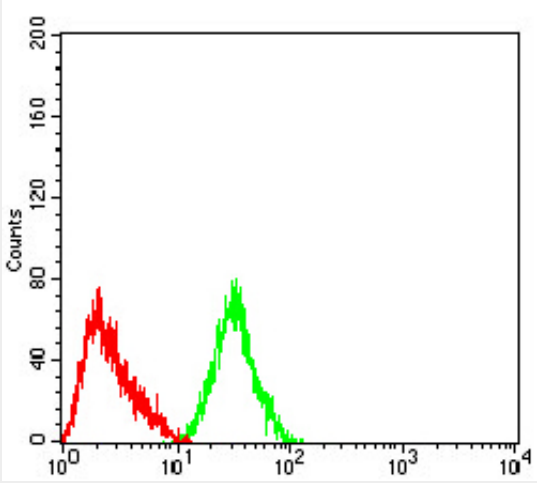

Figure 4:Western blot analysis using CHRNA4 mouse mAb against SH-SY5Y (1) cell lysate.

CHRNA4 - References

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