

AChR α 8 (308): sc-58609

BACKGROUND

Members of the ligand-gated ion channel receptor family are characterized by their fast transmitting response to neurotransmitters. Two important members of this family are the nicotinic acetylcholine and glutamate receptors, both of which are composed of five homologous subunits forming a transmembrane aqueous pore. These transmembrane receptors change conformation in response to their cognate neurotransmitter. Nicotinic acetylcholine receptors (AChRs) are found at the postsynaptic membrane of the neuromuscular junction and bind acetylcholine molecules, allowing ions to move through the pore. Glutamate receptors are found in the postsynaptic membrane of cells in the central nervous system. The activity that is generated at the synapse by the binding of acetylcholine is terminated by acetylcholinesterase, an enzyme that rapidly hydrolyzes acetylcholine. AChR α 8 is a 456 amino acid multi-pass membrane protein belonging to the ligand-gated ionic channel family.

REFERENCES

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2. Betz, H. 1990. Ligand-gated ion channels in the brain: the amino acid receptor superfamily. *Neuron* 5: 383-392.
3. Baenziger, J.E., et al. 1992. Probing conformational changes in the nicotinic acetylcholine receptor by Fourier transform infrared difference spectroscopy. *Biophys. J.* 62: 64-66.
4. Daw, N.W., et al. 1993. The role of NMDA receptors in information processing. *Annu. Rev. Neurosci.* 16: 207-222.
5. Stevens, C.F. 1993. Quantal release of neurotransmitter and long-term potentiation. *Cell* 72: 55-63.
6. Unwin, N. 1993. Neurotransmitter action: opening of ligand-gated ion channels. *Cell* 72 Suppl: 31-41.
7. Sargent, P.B. 1993. The diversity of neuronal nicotinic acetylcholine receptors. *Annu. Rev. Neurosci.* 16: 403-443.
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SOURCE

AChR α 8 (308) is a rat monoclonal antibody raised against bacterially expressed large cytoplasmic domain of AChR α 8 of chicken origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

Each vial contains 200 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AChR α 8 (308) is available conjugated to agarose (sc-58609 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58609 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58609 PE), fluorescein (sc-58609 FITC), Alexa Fluor[®] 488 (sc-58609 AF488), Alexa Fluor[®] 546 (sc-58609 AF546), Alexa Fluor[®] 594 (sc-58609 AF594) or Alexa Fluor[®] 647 (sc-58609 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-58609 AF680) or Alexa Fluor[®] 790 (sc-58609 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

AChR α 8 (308) is recommended for detection of the cytoplasmic surface of both native and denatured nicotinic AChR α 8 between amino acids 323-342 of chicken origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of AChR α 8: 53 kDa.

RESEARCH USE

For research use only, not for use in diagnostic procedures.