

AChR α 1/3/5 (210): sc-58603

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 1, AChR α 3 and AChR α 5 belong to the family of ligand-gated ion channel receptors and may play a role in the mediation of fast signal transmission at synapses. Mutations in the gene encoding AChR α 3 and AChR α 5 are the cause of susceptibility to lung cancer type 2 and defects in the AChR α 1 gene results in lethal type multiple pterygium syndrome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CHRNA3/CHRNA5 (human) mapping to 15q25.1;
Chrna3/Chrna5 (mouse) mapping to 9 B.

SOURCE

AChR α 1/3/5 (210) is a rat monoclonal antibody raised against full length muscle AChR of mouse and bovine origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

AChR α 1/3/5 (210) is recommended for detection of neuronal native AChR α 3 and AChR α 5 of mouse, rat, human, bovine and canine 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); also recommended for detection of denatured AChR α 1, may cross react with human AChR β 3.

Molecular Weight of AChR α 1/3/5: 51/54/57 kDa.

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.



See **AChR α 1 (153): sc-65829** for AChR α 1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.