

AChR α 7 (B-4): sc-374284

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 7, also known as NACHRA7, CHRNA7-2 or CHRNA7, is a 502 amino acid multi-pass membrane protein existing as a homopentamer and interacts with RIC-3, a nicotinic acetylcholine receptor (nAChR)-associated protein.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CHRNA7 (human) mapping to 15q13.3; Chrna7 (mouse) mapping to 7 C.

SOURCE

AChR α 7 (B-4) is a mouse monoclonal antibody raised against amino acids 367-502 mapping at the C-terminus of AChR α 7 of human origin.

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 7 (B-4) is recommended for detection of AChR α 7 of mouse and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for AChR α 7 siRNA (h): sc-42532, AChR α 7 siRNA (m): sc-42533, AChR α 7 shRNA Plasmid (h): sc-42532-SH, AChR α 7 shRNA Plasmid (m): sc-42533-SH, AChR α 7 shRNA (h) Lentiviral Particles: sc-42532-V and AChR α 7 shRNA (m) Lentiviral Particles: sc-42533-V.

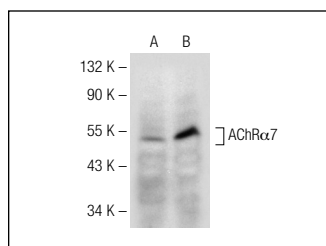
Molecular Weight of AChR α 7: 55 kDa.

Positive Controls: mouse brain extract: sc-2253, SK-N-MC cell lysate: sc-2237 or EOC 20 whole cell lysate: sc-364187.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



AChR α 7 (B-4): sc-374284. Western blot analysis of AChR α 7 expression in SK-N-MC (A) and EOC 20 (B) whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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