

AChR α 2 (H-111): sc-5589

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 2 is a 529 amino acid multi-pass membrane protein belonging to the ligand-gated ion channel receptor family and may be linked to nocturnal frontal lobe epilepsy type 4, an autosomal dominant epilepsy characterized by nocturnal seizures associated with fear sensation, tongue movements, and nocturnal wandering, closely resembling nightmares and sleep walking.

CHROMOSOMAL LOCATION

Genetic locus: CHRNA2 (human) mapping to 8p21.2; Chrna2 (mouse) mapping to 14 D1.

SOURCE

AChR α 2 (H-111) is a rabbit polyclonal antibody raised against amino acids 364-474 of acetylcholine receptor α ₂ subunit of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

AChR α 2 (H-111) is recommended for detection of acetylcholine receptor α ₂ subunit of mouse, rat and human 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).

Suitable for use as control antibody for AChR α 2 siRNA (h): sc-42526, AChR α 2 siRNA (m): sc-42527, AChR α 2 shRNA Plasmid (h): sc-42526-SH, AChR α 2 shRNA Plasmid (m): sc-42527-SH, AChR α 2 shRNA (h) Lentiviral Particles: sc-42526-V and AChR α 2 shRNA (m) Lentiviral Particles: sc-42527-V.

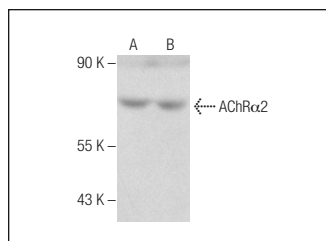
Molecular Weight of AChR α 2: 70 kDa.

Positive Controls: rat testis extract: sc-2400 or mouse testis extract: sc-2405.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



AChR α 2 (H-111): sc-5589. Western blot analysis of AChR α 2 expression in rat testis (A) and mouse testis (B) tissue extracts.

SELECT PRODUCT CITATIONS

- Di Angelantonio, S., et al. 2003. Molecular biology and electrophysiology of neuronal nicotinic receptors of rat chromaffin cells. *Eur J Neurosci.* 17: 2313-2322.
- de Jonge, H.W., et al. 2006. Presence of SERCA and calcineurin during fetal development of porcine skeletal muscle. *J. Histochem. Cytochem.* 54: 641-648.
- Allaman-Pillet, N., et al. 2015. BIRO-1, a cell permeable BH3 peptide, promotes mitochondrial fragmentation and death of retinoblastoma cells. *Mol. Cancer Res.* 13: 86-97.
- Vivekanandarajah, A., et al. 2015. Postnatal nicotine effects on the expression of nicotinic acetylcholine receptors in the developing piglet hippocampus and brainstem. *Int. J. Dev. Neurosci.* 47: 183-191.

RESEARCH USE

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

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Try **AChR α 2 (H-8): sc-365251**, our highly recommended monoclonal alternative to AChR α 2 (H-111).