

AChR α 3 (H-100): sc-5590

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 3, also known as LNCR2, PAOD2, NACHRA3 or CHRNA3, is a 505 amino acid multi-pass membrane protein that belongs to the ligand-gated ion channel receptor family and may play a role in neurotransmission.

CHROMOSOMAL LOCATION

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

SOURCE

AChR α 3 (H-100) is a rabbit polyclonal antibody raised against amino acids 346-445 mapping near the C-terminus of AChR α 3 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.

APPLICATIONS

AChR α 3 (H-100) is recommended for detection of AChR α 3 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).

AChR α 3 (H-100) is also recommended for detection of AChR α 3 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for AChR α 3 siRNA (h): sc-37055, AChR α 3 siRNA (m): sc-37056, AChR α 3 shRNA Plasmid (h): sc-37055-SH, AChR α 3 shRNA Plasmid (m): sc-37056-SH, AChR α 3 shRNA (h) Lentiviral Particles: sc-37055-V and AChR α 3 shRNA (m) Lentiviral Particles: sc-37056-V.

Molecular Weight of AChR α 3: 55 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat brain extract: sc-2392.

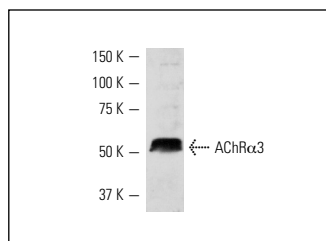
STORAGE

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.

DATA



AChR α 3 (H-100): sc-5590. Western blot analysis of AChR α 3 expression in mouse brain tissue extract.

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.
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- Moser, N., et al. 2007. Evaluating the suitability of nicotinic acetylcholine receptor antibodies for standard immunodetection procedures. *J. Neurochem.* 102: 479-492.
- Rezvani, K., et al. 2009. UBXD4, a UBX-containing protein, regulates the cell surface number and stability of α 3-containing nicotinic acetylcholine receptors. *J. Neurosci.* 29: 6883-6896.
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- Liu, J., et al. 2011. PPAR γ agonist rosiglitazone prevents perinatal nicotine exposure-induced asthma in rat offspring. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 300: L710-L717.
- Rehan, V.K., et al. 2011. Thirdhand smoke: a new dimension to the effects of cigarette smoke on the developing lung. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 301: L1-L8.

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Try **AChR α 3 (C-6): sc-365479** or **AChR α 3 (313): sc-58605**, our highly recommended monoclonal alternatives to AChR α 3 (H-100)