

AChRδ (H-166): sc-14000

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. AChRδ, also known as CMS2A, FCCMS, SCCMS or CHRND, is a 517 amino acid multi-pass membrane protein that is associated with lethal type multiple pterygium syndrome, congenital myasthenic syndrome slow-channel type (SCCMS) and congenital myasthenic syndrome fast-channel type (FCCMS).

REFERENCES

1. Alkondon, M., et al. 1988. Acetylcholinesterase reactivators modify the functional properties of the nicotinic acetylcholine receptor ion channel. *J. Pharmacol. Exp. Ther.* 245: 543-556.
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. Neurol.* 16: 207-222.

CHROMOSOMAL LOCATION

Genetic locus: CHRND (human) mapping to 2q37.1; Chrnd (mouse) mapping to 1 D.

SOURCE

AChRδ (H-166) is a rabbit polyclonal antibody raised against amino acids 335-500 mapping near the C-terminus of AChRδ (δ subunit of nicotinic acetylcholine receptor) of human origin.

PRODUCT

Each vial contains 200 µg 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.

RESEARCH USE

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

APPLICATIONS

AChRδ (H-166) is recommended for detection of AChRδ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 AChRδ siRNA (h): sc-42540, AChRδ siRNA (m): sc-42541, AChRδ shRNA Plasmid (h): sc-42540-SH, AChRδ shRNA Plasmid (m): sc-42541-SH, AChRδ shRNA (h) Lentiviral Particles: sc-42540-V and AChRδ shRNA (m) Lentiviral Particles: sc-42541-V.

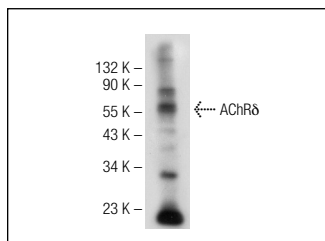
Molecular Weight of AChRδ: 60 kDa.

Positive Controls: BC₃H1 cell lysate: sc-2299.

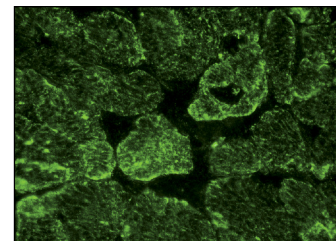
RECOMMENDED SECONDARY REAGENTS

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



AChRδ (H-166): sc-14000. Western blot analysis of AChRδ expression in BC₃H1 whole cell lysate.



AChRδ (H-166): sc-14000. Immunofluorescence staining of normal mouse heart frozen section showing membrane staining.

SELECT PRODUCT CITATIONS

1. O'Leary, D.A., et al. 2007. Targeting of the ETS factor GABPα disrupts neuromuscular junction synaptic function. *Mol. Cell. Biol.* 27: 3470-3480.

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Try **AChRδ (C-4): sc-390896** or **AChRδ (137): sc-65760**, our highly recommended monoclonal alternatives to AChRδ (H-166).