SANTA CRUZ BIOTECHNOLOGY, INC.

AChRε (C-20): sc-1454



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. AChR8, 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

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- Betz, H. 1990. Ligand-gated ion channels in the brain: the amino acid receptor superfamily. Neuron 5: 383-392.
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CHROMOSOMAL LOCATION

Genetic locus: CHRNE (human) mapping to 17p13.2; Chrne (mouse) mapping to 11 B3.

SOURCE

AChR ϵ (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of AChR ϵ 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.

Blocking peptide available for competition studies, sc-1454 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AChR_{ϵ} (C-20) is recommended for detection of AChR_{ϵ} 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 AChR ϵ siRNA (h): sc-42542, AChR ϵ siRNA (m): sc-42543, AChR ϵ shRNA Plasmid (h): sc-42542-SH, AChR ϵ shRNA Plasmid (m): sc-42543-SH, AChR ϵ shRNA (h) Lentiviral Particles: sc-42542-V and AChR ϵ shRNA (m) Lentiviral Particles: sc-42543-V.

Molecular Weight of AChRE: glycosylated from 44-60 kDa.

Positive Controls: mouse brain extract: sc-2253 or SH-SY-5Y whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

MONOS Satisfation Guaranteed

Try AChR ϵ (B-11): sc-376747 or AChR ϵ (D-6): sc-376826, our highly recommended monoclonal alternatives to AChR ϵ (C-20).