

AChR α 2 (K-20): sc-1770

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 associated with 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 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of AChR α 2 of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-1770 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AChR α 2 (K-20) 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), 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 2 (K-20) is also recommended for detection of acetylcholine receptor α 2 subunit in additional species, including equine, canine, bovine and porcine.

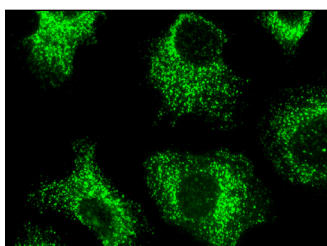
Suitable for use as control antibody for AChR α 2 siRNA (h): sc-42526, AChR α 2 siRNA (m): sc-42527, AChR α 2 shRNA Plasmid (h): sc-42526-SH, AChR α 2 shRNA Plasmid (m): sc-42527-SH, AChR α 2 shRNA (h) Lentiviral Particles: sc-42526-V and AChR α 2 shRNA (m) Lentiviral Particles: sc-42527-V.

Molecular Weight of AChR α 2: 70 kDa.

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) 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.

DATA



AChR α 2 (K-20): sc-1770. Immunofluorescence staining of formalin-fixed HepG2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Burkin, D.J., et al. 1998. A functional role for specific spliced variants of the α 7 β 1 integrin in acetylcholine receptor clustering. *J. Cell Biol.* 143: 1067-1075.
- Di Angelantonio, S., et al. 2003. Molecular biology and electrophysiology of neuronal nicotinic receptors of rat chromaffin cells. *Eur. J. Neurosci.* 17: 2313-2322.
- Xiu, J., et al. 2005. Expression of nicotinic receptors on primary cultures of rat astrocytes and up-regulation of the α 7, α 4 and β 2 subunits in response to nanomolar concentrations of the β -amyloid peptide. *Neurochem. Int.* 47: 281-290.

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.

MONOS
Satisfaction
Guaranteed

Try **AChR α 2 (H-8): sc-365251**, our highly recommended monoclonal alternative to AChR α 2 (K-20).