SANTA CRUZ BIOTECHNOLOGY, INC.

mAChR M5 (C-20): sc-7478

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The muscarinic acetylcholine receptors (mAChR) mediate a variety of cellular responses, including inhibition of adenylate cyclase, breakdown of phosphoinositides and modulation of potassium channels. The mAChRs transduce signals by coupling to G proteins, which then modulate several downstream effector proteins and ion channels. Five mAChR subtypes have been identified, designated M1 to M5. The five receptor subtypes show distinct patterns of tissue distribution, as well as distinct pharmacological and functional properties. The amino acid sequence of each mAChR subtype reflects a structure that is characteristic of G protein-coupled receptors, consisting of seven highly conserved transmembrane segments and a large intracellular region unique to each subtype, which constitutes the effector-coupling domain.

CHROMOSOMAL LOCATION

Genetic locus: CHRM5 (human) mapping to 15q14; Chrm5 (mouse) mapping to 2 E3.

SOURCE

mAChR M5 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of mAChR M5 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-7478 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

mAChR M5 (C-20) is recommended for detection of mAChR M5 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).

mAChR M5 (C-20) is also recommended for detection of mAChR M5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for mAChR M5 siRNA (h): sc-42028, mAChR M5 siRNA (m): sc-42029, mAChR M5 shRNA Plasmid (h): sc-42028-SH, mAChR M5 shRNA Plasmid (m): sc-42029-SH, mAChR M5 shRNA (h) Lentiviral Particles: sc-42028-V and mAChR M5 shRNA (m) Lentiviral Particles: sc-42029-V.

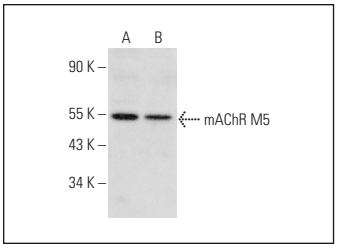
Molecular Weight of mAChR M5: 60 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

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.

DATA



mAChR M5 (C-20): sc-7478. Western blot analysis of mAChR M5 expression in K-562 (**A**) and Jurkat (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tayebati, S.K., et al. 2002. Immunochemical and immunocytochemical characterization of cholinergic markers in human peripheral blood lymphocytes. J. Neuroimmunol. 132: 147-155.
2. Tayebati, S.K., et al. 2004. Age-related changes of muscarinic cholinergic receptor subtypes in the striatum of Fisher 344 rats. Exp. Gerontol. 39: 217-223.
3. Kurzen, H., et al. 2004. Phenotypical and molecular profiling of the extraneuronal cholinergic system of the skin. J. Invest. Dermatol. 123: 937-949.
4. Fiszman, G.L., et al. 2007. Activation of muscarinic cholinergic receptors induces MCF-7 cells proliferation and angiogenesis by stimulating nitric oxide synthase activity. Cancer Biol. Ther. 6: 1106-1113.
5. Ricci, A., et al. 2008. Changes in muscarinic cholinergic receptor expression in human peripheral blood lymphocytes in allergic rhinitis patients. Pulm. Pharmacol. Ther. 21: 79-87.
6. Darabid, H., et al. 2013. Glial cells decipher synaptic competition at the mammalian neuromuscular junction. J. Neurosci. 33: 1297-1313.

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.