SANTA CRUZ BIOTECHNOLOGY, INC.

mAChR M1 (C-20): sc-7470

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: CHRM1 (human) mapping to 11q12.3; Chrm1 (mouse) mapping to 19 A.

SOURCE

mAChR M1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of mAChR M1 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-7470 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

mAChR M1 (C-20) is recommended for detection of mAChR M1 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), immunohistochemistry (including paraffin-embedded sections) (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 M1 (C-20) is also recommended for detection of mAChR M1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for mAChR M1 siRNA (h): sc-35829, mAChR M1 siRNA (m): sc-35830, mAChR M1 shRNA Plasmid (h): sc-35829-SH, mAChR M1 shRNA Plasmid (m): sc-35830-SH, mAChR M1 shRNA (h) Lentiviral Particles: sc-35829-V and mAChR M1 shRNA (m) Lentiviral Particles: sc-35830-V.

Molecular Weight of mAChR M1: 52 kDa.

Positive Controls: mAChR M1 (h2): 293T Lysate: sc-171276 or rat heart extract: sc-2393.

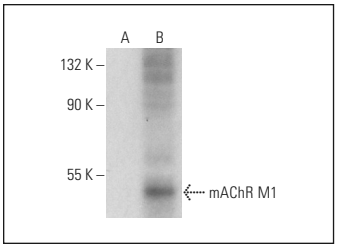
STORAGE

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

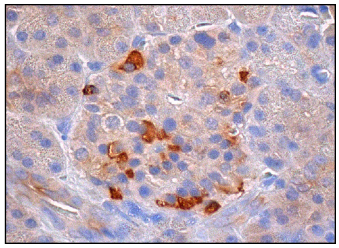
RESEARCH USE

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

DATA



mAChR M1 (C-20): sc-7470. Western blot analysis of mAChR M1 expression in non-transfected: sc-117752 (**A**) and human mAChR M1 transfected: sc-171276 (**B**) 293T whole cell lysates.



mAChR M1 (C-20): sc-7470. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of subsets of cells in Islet of Langerhans.

SELECT PRODUCT CITATIONS

1. Anini, Y., et al. 2002. Muscarinic receptors control postprandial release of glucagon-like peptide-1: *in vivo* and *in vitro* studies in rats. Endocrinol. 143: 2420-2426.
2. Anini, Y., et al. 2003. Muscarinic receptors control glucagon-like peptide 1 secretion by human endocrine L cells. Endocrinology 144: 3244-3250.
3. Tanaka, S., et al. 2003. Autoantibodies against muscarinic cholinergic receptor in chronic fatigue syndrome. Int. J. Mol. Med. 12: 225-230.
4. Tanaka, S., et al. 2003. Autoantibodies against four kinds of neurotransmitter receptors in psychiatric disorders. J. Neuroimmunol. 141: 155-164.
5. Espanol, A.J., et al. 2004. Different muscarinc receptors are involved in the proliferation of murine mammary adenocarcinoma cell lines. Int. J. Mol. Med. 13: 311-317.
6. 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.
7. Kurzen, H., et al. 2004. Phenotypical and molecular profiling of the extraneuronal cholinergic system of the skin. J. Invest. Dermatol. 123: 937-949.
8. 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.
9. 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.