SANTA CRUZ BIOTECHNOLOGY, INC.

mAChR M3 (C-20): sc-7474

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: CHRM3 (human) mapping to 1q43; Chrm3 (mouse) mapping to 13 A1.

SOURCE

mAChR M3 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of mAChR M3 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-7474 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

mAChR M3 (C-20) is recommended for detection of mAChR M3 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 mAChR M3 siRNA (h): sc-35833, mAChR M3 siRNA (m): sc-35834, mAChR M3 shRNA Plasmid (h): sc-35833-SH, mAChR M3 shRNA Plasmid (m): sc-35834-SH, mAChR M3 shRNA (h) Lentiviral Particles: sc-35833-V and mAChR M3 shRNA (m) Lentiviral Particles: sc-35834-V.

Molecular Weight of mAChR M3: 75 kDa.

Positive Controls: mouse brain extract: sc-2253 or BC_3H1 cell lysate: sc-2299.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

SELECT PRODUCT CITATIONS

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4. Espanol, A.J., et al. 2003. Parasympathetic modulation of local acute inflammation in murine submandibular glands. Inflammation 27: 97-105.
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6. Dawson, L.J., et al. 2004. Putative anti-muscarinic antibodies cannot be detected in patients with primary Sjogren's syndrome using conventional immunological approaches. Rheumatology 43: 1488-1495.
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8. Hamamura, M., et al. 2006. Muscarinic acetylcholine receptor subtypes in the rat seminal vesicle. Mol. Cell. Endocrinol. 247: 192-198.
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10. Sato, K., et al. 2007. Involvement of CPI-17 downregulation in the dysmotility of the colon from dextran sodium sulphate-induced experimental colitis in a mouse model. Neurogastroenterol. Motil. 19: 504-514.
11. 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.
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13. Hirota, C.L., et al. 2009. Loss of Ca-mediated ion transport during colitis correlates with reduced ion transport responses to a Ca-activated K channel opener. Br. J. Pharmacol. 156: 1085-1097.
14. Lage, K., et al. 2010. Dissecting spatio-temporal protein networks driving human heart development and related disorders. Mol. Syst. Biol. 6: 381.

RESEARCH USE

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