

mAChR M2 (H-170): sc-9107

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.

REFERENCES

1. Peralta, E.G., et al. 1987. Primary structure and biochemical properties of an M2 muscarinic receptor. *Science* 236: 600-605.
2. Liao, C.F., et al. 1989. Molecular cloning and expression of a fifth muscarinic acetylcholine receptor. *J. Biol. Chem.* 264: 7328-7337.
3. Hulme, E.C. 1990. Muscarinic acetylcholine receptors: typical G coupled receptors. *Symp. Soc. Exp. Biol.* 44: 39-54.

CHROMOSOMAL LOCATION

Genetic locus: CHRM2 (human) mapping to 7q33; Chrm2 (mouse) mapping to 6 B1.

SOURCE

mAChR M2 (H-170) is a rabbit polyclonal antibody raised against amino acids 211-380 of mAChR M2 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.

APPLICATIONS

mAChR M2 (H-170) is recommended for detection of mAChR M2 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 M2 siRNA (h): sc-35831, mAChR M2 siRNA (m): sc-35832, mAChR M2 shRNA Plasmid (h): sc-35831-SH, mAChR M2 shRNA Plasmid (m): sc-35832-SH, mAChR M2 shRNA (h) Lentiviral Particles: sc-35831-V and mAChR M2 shRNA (m) Lentiviral Particles: sc-35832-V.

Molecular Weight of mAChR M2: 70-75 kDa.

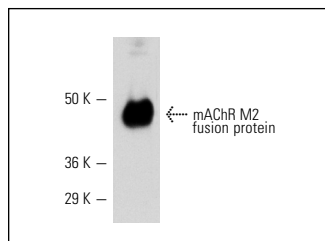
RESEARCH USE

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

STORAGE

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

DATA



mAChR M2 (H-170): sc-9107. Western blot analysis of human recombinant mAChR M2 fusion protein.

SELECT PRODUCT CITATIONS

1. Oyachi, N., et al. 2003. Development of ovine fetal ileal motility: role of muscarinic receptor subtypes. *Am. J. Obstet. Gynecol.* 189: 953-957.
2. González, I., et al. 2007. Effects of β -amyloid protein on M1 and M2 subtypes of muscarinic acetylcholine receptors in the medial septum-diagonal band complex of the rat: relationship with cholinergic, GABAergic, and calcium-binding protein perikarya. *Acta Neuropathol.* 113: 637-651.
3. Profita, M., et al. 2008. Acetylcholine mediates the release of IL-8 in human bronchial epithelial cells by a NFkB/ERK-dependent mechanism. *Eur. J. Pharmacol.* 582: 145-153.
4. Profita, M., et al. 2009. Smoke, choline acetyltransferase, muscarinic receptors, and fibroblast proliferation in chronic obstructive pulmonary disease. *J. Pharmacol. Exp. Ther.* 329: 753-763.
5. Cardoso, C.C., et al. 2010. Effects of 17 β -estradiol on expression of muscarinic acetylcholine receptor subtypes and estrogen receptor α in rat hippocampus. *Eur. J. Pharmacol.* 634: 192-200.
6. Barbuti, A., et al. 2010. Mesoangioblasts from ventricular vessels can differentiate *in vitro* into cardiac myocytes with sinoatrial-like properties. *J. Mol. Cell. Cardiol.* 2010. 48: 415-423.
7. Aykac, A., et al. 2012. The change in muscarinic receptor subtypes in different brain regions of rats treated with fluoxetine or propranolol in a model of post-traumatic stress disorder. *Behav. Brain Res.* 232: 124-129.
8. Profita, M., et al. 2012. β_2 long-acting and anticholinergic drugs control TGF- β 1-mediated neutrophilic inflammation in COPD. *Biochim. Biophys. Acta* 1822: 1079-1089.

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Try **mAChR M2 (M2-2-B3): sc-33712**, our highly recommended monoclonal alternative to mAChR M2 (H-170).