SANTA CRUZ BIOTECHNOLOGY, INC.

mAChR M2 (2Q147): sc-71531

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.

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.
4. Hulme, E.C., et al. 1991. Muscarinic acetylcholine receptors: structure and function. Biochem. Soc. Trans. 19: 133-138.
5. Caulfield, M.P. 1993. Muscarinic receptors—characterization, coupling and function. Pharmacol. Ther. 58: 319-379.
6. Brann, M.R., et al. 1993. Muscarinic acetylcholine receptor subtypes: localization and structure/function. Prog. Brain Res. 98: 121-127.
7. Tice, M.A., et al. 1996. Distribution of muscarinic receptor subtypes in rat brain from postnatal to old age. Brain Res. Dev. Brain Res. 92: 70-76.
8. Brauner-Osborne, H., et al. 1996. Pharmacology of muscarinic acetylcholine receptor subtypes (M1-M5): high throughput assays in mammalian cells. Eur. J. Pharmacol. 295: 93-102.

CHROMOSOMAL LOCATION

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

SOURCE

mAChR M2 (2Q147) is a rat monoclonal antibody raised against i3 loop of M2 receptor fusion protein.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

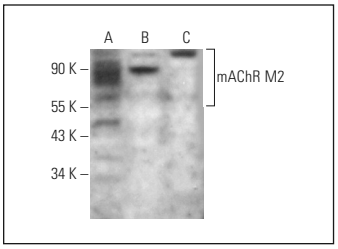
mAChR M2 (2Q147) is recommended for detection of mAChR M2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunohistochemistry (frozen sections) (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunofluorescence.

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.

Positive Controls: IMR-32 cell lysate: sc-2409, SH-SY5Y cell lysate: sc-3812 or Neuro-2A whole cell lysate: sc-364185.

DATA



mAChR M2 (2Q147): sc-71531. Western blot analysis of mAChR M2 expression in IMR-32 (**A**), SH-SY5Y (**B**) and Neuro-2A (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Harada, K., et al. 2011. Identification and role of muscarinic receptor subtypes expressed in rat adrenal medullary cells. J. Pharmacol. Sci. 117: 253-264.

RESEARCH USE

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

PROTOCOLS

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