SANTA CRUZ BIOTECHNOLOGY, INC.

mAChR M2 (31-3B7): sc-80971

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 sub-type, which constitutes the effector-coupling domain.

REFERENCES

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2. Liao, C.F., Themmen, A.P., Joho, R., Barberis, C., Birnbaumer, M. and Birnbaumer, L. 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., Kurtenbach, E. and Curtis, C A. 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., Ellis, J., Jørgensen, H., Hill-Eubanks, D. and Jones, S.V. 1993. Muscarinic acetylcholine receptor subtypes: localization and structure/function. Prog. Brain Res. 98: 121-127.
7. Tice, M.A., Hashemi, T., Taylor, L.A. and McQuade, R.D. 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. and Brann, M.R. 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 (31-3B7) is a mouse monoclonal antibody raised against mAChR M2 of porcine origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

mAChR M2 (31-3B7) is recommended for detection of mAChR M2 of mouse, rat, human and porcine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; non cross-reactive with other porcine atrial glycoproteins; may cross-react with porcine cardiac receptor subtype.

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.

SELECT PRODUCT CITATIONS

1. Zhao, Z., Azad, R., Yang, J.H., Siroky, M.B. and Azadzoi, K.M. 2016. Progressive changes in detrusor function and micturition patterns with chroinc bladder ischemia. Investig. Clin. Urol. 57: 249-259.

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.

PROTOCOLS

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