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


CHROMOSOMAL LOCATION

Genetic locus: CHRM2 (human) mapping to 7q31-q35, Chrm2 (mouse) mapping to 6 B1.

SOURCE

mAChR M2 (M2-2-B3) is a rat monoclonal antibody raised against i3 loop of M2 receptor fusion protein.

PRODUCT

Each vial contains 200 µg IgG2a 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 (M2-2-B3) 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)), 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.

Recombinant Human mAChR M2 contains the i3 loop from the human M2 receptor, which is exposed on the extracellular surface of the recombinant protein.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rat IgG-HRP: sc-2006 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-rat IgG-HRP: sc-2032 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunohistochemistry: use ABC: sc-2019 rat IgG Staining System.

DATA

mAChR M2 (M2-2-B3): sc-33712. Western blot analysis of human recombinant mAChR M2 fusion protein.

RESEARCH USE

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

PROTOCOLS

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