SANTA CRUZ BIOTECHNOLOGY, INC.

mAChR M3 (H-4): sc-518107

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.

SOURCE

mAChR M3 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 562-590 at the C-terminus of mAChR M3 of human origin.

PRODUCT

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

mAChR M3 (H-4) is available conjugated to agarose (sc-518107 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518107 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518107 PE), fluorescein (sc-518107 FITC), Alexa Fluor® 488 (sc-518107 AF488), Alexa Fluor® 546 (sc-518107 AF546), Alexa Fluor® 594 (sc-518107 AF594) or Alexa Fluor® 647 (sc-518107 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518107 AF680) or Alexa Fluor® 790 (sc-518107 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

mAChR M3 (H-4) is recommended for detection of mAChR M3 of 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)], 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 shRNA Plasmid (h): sc-35833-SH and mAChR M3 shRNA (h) Lentiviral Particles: sc-35833-V.

Molecular Weight of mAChR M3: 75 kDa.

Positive Controls: mAChR M3 (h): 293T Lysate: sc-177501.

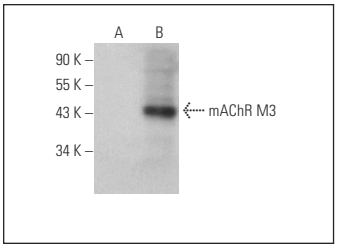
RESEARCH USE

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



mAChR M3 (H-4): sc-518107. Western blot analysis of mAChR M3 expression in non-transfected: sc-117752 (**A**) and human mAChR M3 transfected: sc-177501 (**B**) 293T whole cell lysates. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.

SELECT PRODUCT CITATIONS

1. Yan, J.T., et al. 2021. Reduced acetylcholine and elevated muscarinic receptor 2 in duodenal mucosa contribute to the impairment of mucus secretion in 6-hydroxydopamine-induced Parkinson's disease rats. Cell Tissue Res. 386: 249-260.
2. Zhu, X., et al. 2022. Astragaloside IV protects detrusor from partial bladder outlet obstruction-induced oxidative stress by activating mitophagy through AMPK-ULK1 pathway. Oxid. Med. Cell. Longev. 2022: 5757367.
3. Toan, N.K., et al. 2022. Ascorbic acid induces salivary gland function through TET2/acetylcholine receptor signaling in aging SAMP1/Klotho$^{-/-}$ mice. Aging 14: 6028-6046.

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 for detailed protocols and support products.