SANTA CRUZ BIOTECHNOLOGY, INC.

mAChR M1 (h5): 293T Lysate: sc-158705

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 receptor-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 (ML-M5): high throughput assays in mammalian cells. Eur. J. Pharmacol. 295: 93-102.

CHROMOSOMAL LOCATION

Genetic locus: CHRM1 (human) mapping to 11q12.3.

PRODUCT

mAChR M1 (h5): 293T Lysate represents a lysate of human mAChR M1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

mAChR M1 (h5): 293T Lysate is suitable as a Western Blotting positive control for human reactive mAChR M1 antibodies. Recommended use: 10-20 µl per lane.

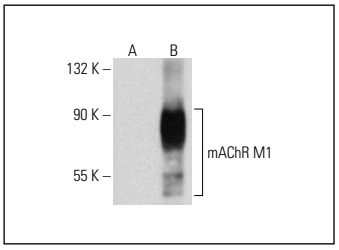
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

mAChR M1 (G-9): sc-365966 is recommended as a positive control antibody for Western Blot analysis of enhanced human mAChR M1 expression in mAChR M1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

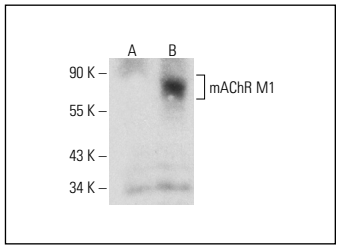
RECOMMENDED SUPPORT REAGENTS

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.

DATA



mAChR M1 (G-9): sc-365966. Western blot analysis of mAChR M1 expression in non-transfected: sc-117752 (**A**) and human mAChR M1 transfected: sc-158705 (**B**) 293T whole cell lysates.



mAChR M1 (H-2): sc-365548. Western blot analysis of mAChR M1 expression in non-transfected: sc-117752 (**A**) and human mAChR M1 transfected: sc-158705 (**B**) 293T whole cell lysates.

RESEARCH USE

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