



**Polyclonal Anti- Muscarinic Acetylcholine Receptor M2, *CHRM2* (Sepharose Bead Conjugate)**

**Catalogue No.** PA1325-S

**Lot No.** 013101252564

**Ig type:** rabbit IgG

**Size:** 100µg/vial

**Specificity**

Rat. No cross reactivity with other proteins.

**Recommended application**

(Immunoprecipitation(IP))

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminal of human CHRM2(451-466aa), identical to the related rat sequence.

**Purification**

Immunogen affinity purified.

**Formulation**

50% slurry in PBS pH 7.2 with 0.01mg NaN<sub>3</sub>a<sub>3</sub> preservative.

**Storage**

Store at 4°C for frequent use.

**Description:**

This Antagene antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sepharose beads. It is useful for immunoprecipitation assays

**BACKGROUND**

The muscarinic acetylcholine receptor M2, also known as the cholinergic receptor, muscarinic 2, is a muscarinic acetylcholine receptor. The M2 muscarinic receptors are located in the heart, where they act to slow the heart rate down to normal sinus rhythm after stimulatory actions of the sympathetic nervous system, by slowing the speed of depolarization. The CHRM2 gene inhibits the release of acetylcholine from cholinergic fibers in the lungs and elsewhere. In airway parasympathetic neurons, it is decreased by viral infections and by interferon-gamma, increasing acetylcholine release. This gene is thought to be involved in neuronal excitability, synaptic plasticity and feedback regulation of acetylcholine release and has previously been implicated in higher cognitive processing. In a sample of 667 individuals from 304 families, Gosso MF et al. genotyped three single-nucleotide polymorphisms (SNPs) in the CHRM2 gene on 7q31-35. CHRM2 is implicated in memory and cognition, functions impaired in many neuropsychiatric disorders. Wang et al. evidence of common and specific genetic effects: association of the muscarinic acetylcholine receptor M2 (CHRM2) gene with alcohol dependence and major depressive syndrome.

**REFERENCE**

1. Zhou, C., Fryer, A. D., Jacoby, D. B. Structure of the human M(2) muscarinic acetylcholine receptor gene and its promoter. *Gene* 271: 87-92, 2001.
2. Gosso MF, van Belzen M, de Geus EJ, *et al.* (2006). "Association between the CHRM2 gene and intelligence in a sample of 304 Dutch families". *Genes, Brain and Behavior* 5 (8): 577-584.
3. Wang, J. C., Hinrichs, A. L., Stock, H., Budde, J., Allen, R., Bertelsen, S., Kwon, J. M., Wu, W., Dick, D. M., Rice, J., Jones, K., Nurnberger, J. I., Jr., and 10 others Evidence of common and specific genetic effects: association of the muscarinic acetylcholine receptor M2 (CHRM2) gene with alcohol dependence and major depressive syndrome. *Hum. Molec. Genet.* 13: 1903-1911, 2004.

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