

Polyclonal Anti-CHRM2 Antibody

Catalog Number: PA1325-1

Description

Gene Name	cholinergic receptor, muscarinic 2
Recommended Protein Name	Muscarinic acetylcholine receptor M2
Lot No.	0131512c012548
Size	100µg/vial
Form	lyophilized
Ig type	Rabbit IgG
Specificity	No cross reactivity with other proteins.
Purification	Immunogen affinity purified.
Species	Reacts with: human, mouse, rat
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human CHRM2(356-370aa EKQNIVARKIVKMTK), identical to the related rat and mouse sequences.
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .

Application

	Concentration	Tested Species	Predicted Species	Antigen Retrieval
Western blot	0.1-0.5µg/ml	Hu, Ms, Rat	-	-
Immunohistochemistry (Paraffin-embedded Section)	0.5-1µg/ml	Hu, Rat	Ms	By Heat

WB: The detection limit for CHRM2 is approximately 1ng/lane under reducing conditions.

Tested Species: In-house tested species with positive results.

Predicted Species: Species predicted to be fit for the product based on sequence similarities.

By Heat: Boiling the paraffin sections in 10mM citrate buffer, pH6.0, for 20mins is required for the staining of formalin/paraffin sections.

Other applications have not been tested.

Optimal dilutions should be determined by end users.

Preparation and storage

Reconstitution: 0.2ml of distilled water will yield a concentration of 500µg/ml.

Storage: At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time.

Avoid repeated freezing and thawing.

Relevant detection systems

Boster provides a series of assays reacted with primary antibodies. Antibody can be supported by chemiluminescence kit EK1002 in WB, supported by SA1022 in IHC(P).

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.