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Datasheet for ABIN2192224

anti-Muscarinic Acetylcholine Receptor M2 antibody**2** Publications

Overview

Quantity:	100 µg
Target:	Muscarinic Acetylcholine Receptor M2 (CHRM2)
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Muscarinic Acetylcholine Receptor M2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Flow Cytometry (FACS), Functional Studies (Func), Immunoassay (IA)

Product Details

Clone:	B8E5
Sterility:	0.2 µm filtered

Target Details

Target:	Muscarinic Acetylcholine Receptor M2 (CHRM2)
Alternative Name:	Muscarinic Acetylcholine Receptor m2 (CHRM2 Products)
Background:	The monoclonal antibody B8E5 recognizes human muscarinic acetylcholine receptor M2 (M2 receptor), a G protein-coupled cardiovascular receptor of ~55 kDa. This receptor is an integral membrane protein consisting of seven membrane spanning α -helices linked together by extra- and intracellular loops that form a pharmacophore pocket. Autoantibodies directed against cardiovascular G protein-coupled receptors functionally interfering with the target have been

Target Details

described in several cardiovascular diseases. The M2 receptor is the predominant subtype of muscarinic receptors present in the heart of mammalian species. The muscarinic acetylcholine receptor mediates various cellular responses, including inhibition of adenylate cyclase, breakdown of phosphoinositides and modulation of potassium channels through the action of G proteins. Primary transducing effect is adenylate cyclase inhibition. 2+ Monoclonal antibody B8E5 inhibits the β -adrenergic L-type Ca currents through activation of the muscarinic acetylcholine receptor M2. It suggests that the antibody acts not via the classical pathway of decreasing cAMP, but rather by increasing cGMP. Monoclonal antibody B8E5 acts by functional dimerization of the receptor resulting in stabilization of the constitutive active receptor dimers and paradoxically induces a small decrease in carbachol affinity for the M2 receptor. It recognizes the pentapeptide VRTVE (aa 168-172) corresponding to the N-terminal part of the second extracellular loop of the human M2 receptor. M2ACh-R Aliases Peptide VRTVEDGECYIQFFSNAAVTFGTAI(C): Human second extracellular loop residues 168-192 Immunogen Mouse IgG2a

Application Details

Application Notes: It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50. For functional studies, in vitro dilutions have to be optimized in user's experimental setting. Product should be stored at 4 °C. Under recommended storage conditions, product is stable for one year

Restrictions: For Research Use only

Handling

Buffer: PBS, containing 0.1 % bovine serum albumin.

Storage: 4 °C

Publications

Product cited in: Nascimento, Sallé, Hoebeke, Argibay, Peineau: "cGMP-mediated inhibition of cardiac L-type Ca(2+) current by a monoclonal antibody against the M(2) ACh receptor." in: **American journal of physiology. Cell physiology**, Vol. 281, Issue 4, pp. C1251-8, (2001) ([PubMed](#)).

Elies, Fu, Eftekhari, Wallukat, Schulze, Granier, Hjalmarsen, Hoebeke: "Immunochemical and functional characterization of an agonist-like monoclonal antibody against the M2 acetylcholine receptor." in: **European journal of biochemistry / FEBS**, Vol. 251, Issue 3, pp. 659-66, (1998) (

[PubMed](#)).