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CHRM2 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8445b

Product Information

Application	WB, IHC-P, IF, FC, E
Primary Accession	P08172
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,κ
Clone Names	1424CT461.78.60
Calculated MW	51715
Antigen Region	Recombinant Protein

Additional Information

Gene ID	1129
Other Names	Muscarinic acetylcholine receptor M2, CHRM2
Target/Specificity	This antibody is generated from a mouse immunized with a recombinant protein.
Dilution	WB~~1:500 IHC-P~~1:25 IF~~1:25 FC~~1:25 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CHRM2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CHRM2
Function	Muscarinic receptor for acetylcholine, a neurotransmitter found in the brain, neuromuscular junctions and the autonomic ganglia (PubMed:24256733, PubMed:3443095, PubMed:36690613). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of

downstream effectors, such as adenylate cyclase (PubMed:36690613). CHRM2 is coupled to G(i)/G(o) (GNAI1 or GNAO1) G proteins and mediates signaling by inhibiting adenylate cyclase activity (PubMed:36690613).

Cellular Location

Cell membrane; Multi-pass membrane protein. Postsynaptic cell membrane; Multi-pass membrane protein. Note=Phosphorylation in response to agonist binding promotes receptor internalization {ECO:0000250|UniProtKB:P06199}

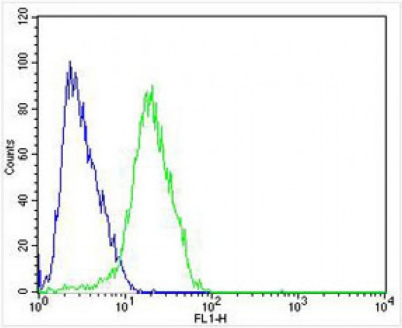
Background

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.

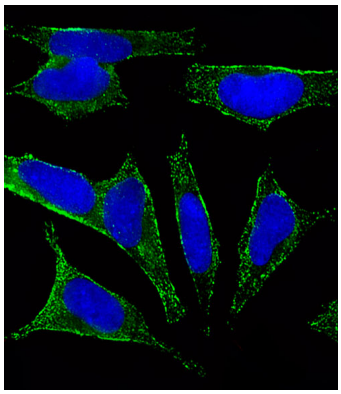
References

Bonner T.I.,et al.Science 237:527-532(1987).
Peralta E.G.,et al.EMBO J. 6:3923-3929(1987).
Puhl H.L. III,et al.Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
Kitano T.,et al.Mol. Biol. Evol. 21:936-944(2004).
Gurevich V.V.,et al.J. Biol. Chem. 270:720-731(1995).

Images

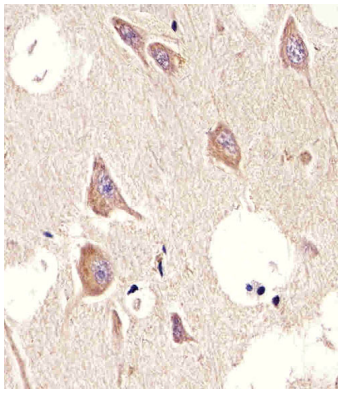


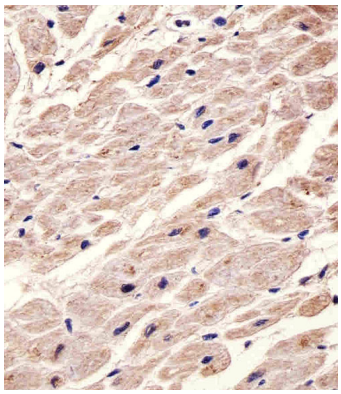
Overlay histogram showing SH-SY5Y cells stained with (green line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse lgG (166821) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



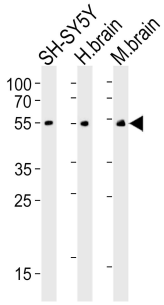
Fluorescent image of SH-SY5Y cells stained with CHRM2 Antibody (Cat#AM8445b). AM8445b was diluted at 1:25 dilution. An Alexa Fluor® 488-conjugated goat anti-mouse lgG at 1:400 dilution was used as the secondary antibody (green). DAPI was used to stain the cell nuclear (blue).

Immunohistochemical analysis of paraffin-embedded H. brain section using CHRM2(Cat#AM8445b). AM8445b was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.





Immunohistochemical analysis of paraffin-embedded H. heart section using CHRM2 (Cat#AM8445b). AM8445b was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



Western blot analysis of lysates from SH-SY5Y cell line, human brain, mouse brain tissue(from left to right), using CHRM2 Antibody(Cat. #AM8445b). AM8445b was diluted at 1:500 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:3000 dilution was used as the secondary antibody. Lysates at 20µg per lane.