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CHRM2 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AW5457

Product Information

Application	IHC-P, IF, WB, FC
Primary Accession	P08172
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Calculated MW	51715
Isotype	IgG1,κ
Antigen Source	HUMAN

Additional Information

Gene ID	1129
Other Names	Muscarinic acetylcholine receptor M2, CHRM2
Dilution	IHC-P~~1:100~500 IF~~1:25 WB~~1:1000 FC~~1:25
Target/Specificity	This antibody is generated from a mouse immunized with a recombinant protein.
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}

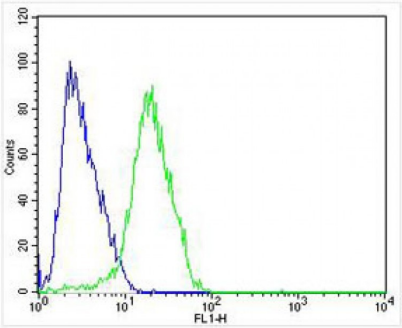
Background

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.

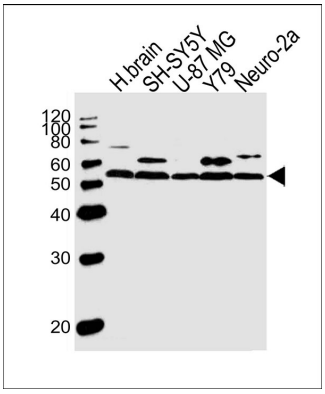
References

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

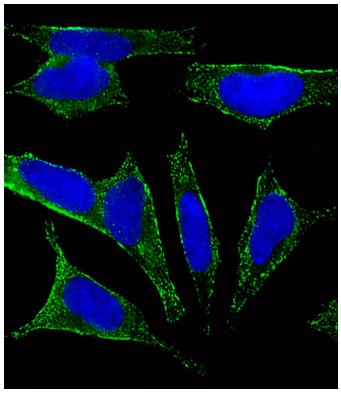


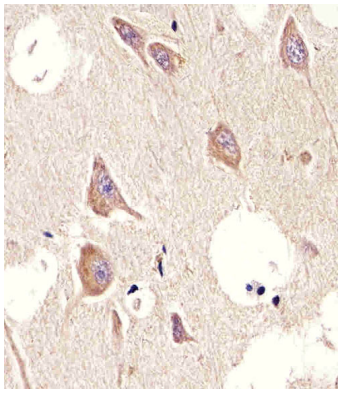
Overlay histogram showing SH-SY5Y cells stained with (green line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (, 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.



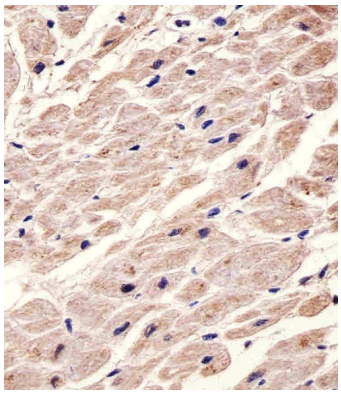
All lanes : Anti-CHRM2 Antibody at 1:1000 dilution Lane 1: human brain lysates Lane 2: SH-SY5Y whole cell lysates Lane 3: U-87 MG whole cell lysates Lane 4: Y79 whole cell lysates Lane 5: Neuro-2a whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 52 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Fluorescent image of SH-SY5Y cells stained with CHRM2 Antibody (Cat#AW5457). AW5457 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#AW5457). AW5457 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#AW5457). AW5457 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.