

Anti-Muscarinic Acetylcholine Receptor 1/CHRM1 Antibody

Catalog Number: A04081

About CHRM1

The muscarinic acetylcholine receptor M1, also known as the cholinergic receptor, muscarinic 1, is a muscarinic receptor that in humans is encoded by the CHRM1 gene. The muscarinic cholinergic receptors belong to a larger family of G protein-coupled receptors. The functional diversity of these receptors is defined by the binding of acetylcholine and includes cellular responses such as adenylate cyclase inhibition, phosphoinositide degeneration, and potassium channel mediation. Muscarinic receptors influence many effects of acetylcholine in the central and peripheral nervous system. The muscarinic cholinergic receptor 1 is involved in mediation of vagally-induced bronchoconstriction and in the acid secretion of the gastrointestinal tract. The gene encoding this receptor is localized to 11q13.

Overview

Product Name	Anti-Muscarinic Acetylcholine Receptor 1/CHRM1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Muscarinic Acetylcholine Receptor 1/CHRM1 Antibody catalog # A04081. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P11229

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Muscarinic Acetylcholine Receptor 1/CHRM1, identical to the related mouse and rat sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti- Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.25-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat Flow Cytometry, 1-3ug/1x10⁶ cells, Human

Anti-Muscarinic Acetylcholine Receptor 1/CHRM1 Antibody (A04081) Images

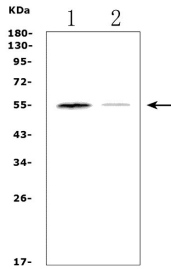


Figure 1. Western blot analysis of CHRM1 using anti-CHRM1 antibody (A04081).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: rat C6 whole cell lysates,
Lane 2: mouse Neuro-2A whole cell lysates.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CHRM1 antigen affinity purified polyclonal antibody (Catalog # A04081) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for CHRM1 at approximately 55KD. The expected band size for CHRM1 is at 51KD.

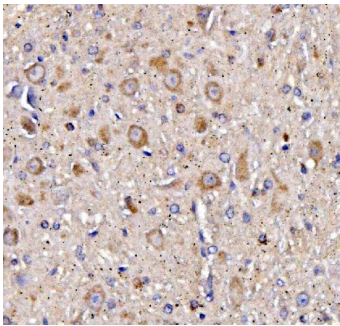


Figure 2. IHC analysis of CHRM1 using anti-CHRM1 antibody (A04081).

CHRM1 was detected in paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CHRM1 Antibody (A04081) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

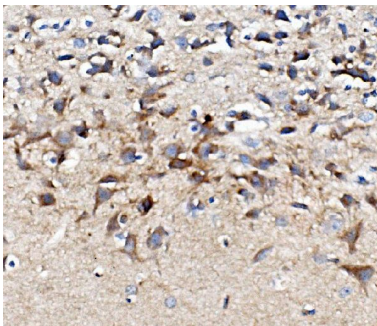
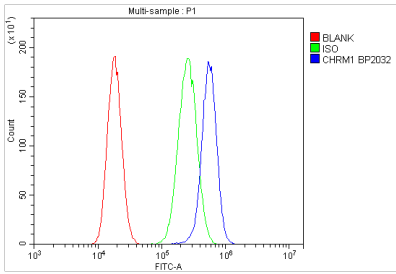


Figure 3. IHC analysis of CHRM1 using anti-CHRM1 antibody (A04081).

CHRM1 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CHRM1 Antibody (A04081) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

Figure 4. Flow Cytometry analysis of PC-3 cells using anti-CHRM1 antibody (A04081).

Overlay histogram showing PC-3 cells stained with A04081 (Blue line).The cells were blocked with 10% normal goat



serum. And then incubated with rabbit anti-CHRM1 Antibody (A04081, 1 μ g/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 μ g/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 μ g/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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