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Anti-Nicotinic Acetylcholine Receptor alpha 5/CHRNA5 Antibody Picoband™

Catalog Number: A02359-2

About CHRNA5

Neuronal acetylcholine receptor subunit alpha-5 is a protein that in humans is encoded by the CHRNA5 gene. It is mapped to 15q25.1. The protein encoded by this gene is a nicotinic acetylcholine receptor subunit and a member of a superfamily of ligand-gated ion channels that mediate fast signal transmission at synapses. These receptors are thought to be heteropentamers composed of separate but similar subunits. Defects in this gene have been linked to susceptibility to lung cancer type 2 (LNCR2).

Overview

Product Name	Anti-Nicotinic Acetylcholine Receptor alpha 5/CHRNA5 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Nicotinic Acetylcholine Receptor alpha 5/CHRNA5 Antibody Picoband™ catalog # A02359-2. Tested in Flow Cytometry, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	P30532

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human CHRNA5, different from the related mouse sequence by five amino acids, and from the related rat sequence by four amino acids.
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), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

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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: Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5ug/ml, Human, Rat Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Human Immunocytochemistry, 0.5-1ug/ml, Human Flow Cytometry, 1-3ug/1x10^6 cells, Human

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Anti-Nicotinic Acetylcholine Receptor alpha 5/CHRNA5 Antibody Picoband™ (A02359-2) Images

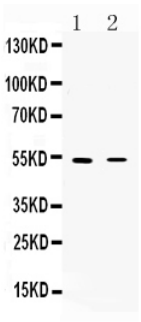

Figure 1. Western blot analysis of CHRNA5 using anti-CHRNA5 antibody (A02359-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
lane 1: rat skeletal muscle tissue lysates,
lane 2: HEPG2 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-CHRNA5 antigen affinity purified polyclonal antibody (Catalog # A02359-2) 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 1:10000 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 CHRNA5 at approximately 53KD. The expected band size for CHRNA5 is at 53KD.

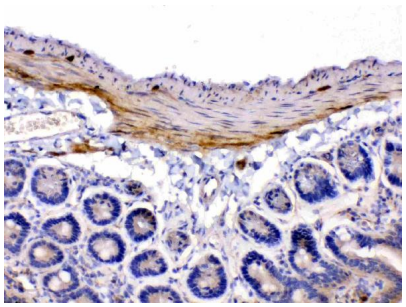

Figure 2. IHC analysis of CHRNA5 using anti-CHRNA5 antibody (A02359-2).
CHRNA5 was detected in paraffin-embedded section of mouse intestine tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-FBXL4 Antibody (A02359-2) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

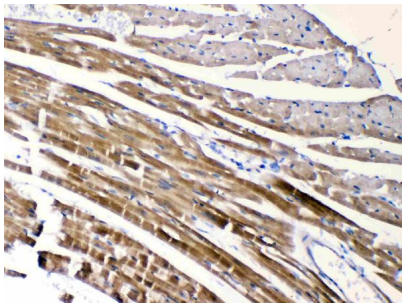

Figure 3. IHC analysis of CHRNA5 using anti-CHRNA5 antibody (A02359-2).
CHRNA5 was detected in paraffin-embedded section of mouse cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CHRNA5 Antibody (A02359-2) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

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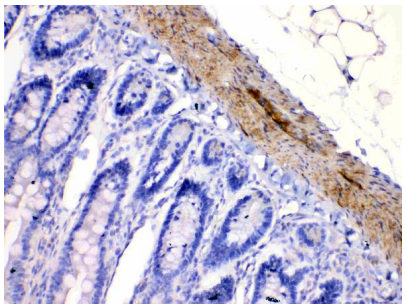

Figure 4. IHC analysis of CHRNA5 using anti-CHRNA5 antibody (A02359-2).
CHRNA5 was detected in paraffin-embedded section of rat intestine tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CHRNA5 Antibody (A02359-2) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

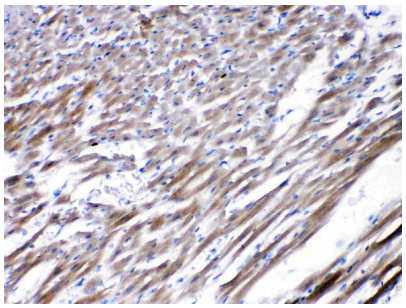

Figure 5. IHC analysis of CHRNA5 using anti-CHRNA5 antibody (A02359-2).
CHRNA5 was detected in paraffin-embedded section of rat cardiac muscle tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-FBXL4 Antibody (A02359-2) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

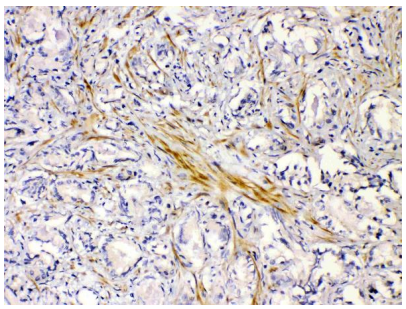

Figure 6. IHC analysis of CHRNA5 using anti-CHRNA5 antibody (A02359-2).
CHRNA5 was detected in paraffin-embedded section of human prostatic cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CHRNA5 Antibody (A02359-2) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

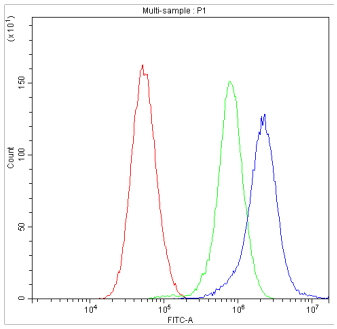

Figure 7. Flow Cytometry analysis of U251 cells using anti-CHRNA5 antibody (A02359-2).
Overlay histogram showing U251 cells stained with A02359-2 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CHRNA5 Antibody (A02359-2,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Figure 8. Flow Cytometry analysis of A549 cells using anti-CHRNA5 antibody (A02359-2).
Overlay histogram showing A549 cells stained with

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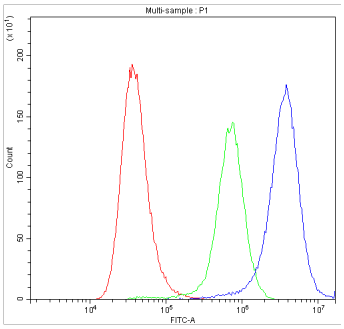

A02359-2 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CHRNA5 Antibody (A02359-2,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

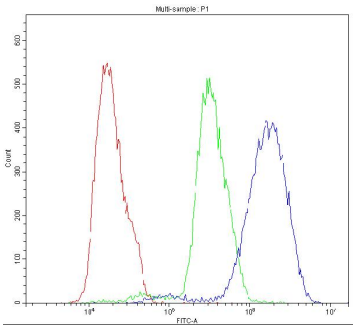

Figure 9. Flow Cytometry analysis of MCF-7 cells using anti-CHRNA5 antibody (A02359-2).
Overlay histogram showing MCF-7 cells stained with A02359-2 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CHRNA5 Antibody (A02359-2,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

5 Publications Citing This Product

1. PubMed ID: 10.3390/md17050256, Cervical Cancer Correlates with the Differential Expression of Nicotinic Acetylcholine Receptors and Reveals Therapeutic Targets

2. PubMed ID: 10.3390/md18010061, Differential Expression of Nicotine Acetylcholine Receptors Associates with Human Breast Cancer and Mediates Antitumor Activity of alphaO-Conotoxin GeXIVA

3. PubMed ID: 10.1016/j.ejphar.2019.172674, Identification of nicotinic acetylcholine receptor subunits in different lung cancer cell lines and the inhibitory effect of alpha-conotoxin TxID on lung cancer cell growth

Visit bosterbio.com/anti-chrna5-picoband-trade-antibody-a02359-2-boster.html to see all 5 publications.

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