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Anti-ATP5F1,2,3/ATP5MC1,2,3 Picoband® Antibody (monoclonal, 12E9)

Catalog Number: M09735

About ATP5MC1,2,3

The ATP5MC1 gene is one of three human paralogs that encode membrane subunit c of the mitochondrial ATP synthase. It is mapped to 17q21.32. This gene encodes a subunit of mitochondrial ATP synthase. Mitochondrial ATP synthase catalyzes ATP synthesis, utilizing an electrochemical gradient of protons across the inner membrane during oxidative phosphorylation. ATP synthase is composed of two linked multi-subunit complexes: the soluble catalytic core, F1, and the membrane-spanning component, Fo, comprising the proton channel. The catalytic portion of mitochondrial ATP synthase consists of 5 different subunits (alpha, beta, gamma, delta, and epsilon) assembled with a stoichiometry of 3 alpha, 3 beta, and a single representative of the other 3. The proton channel seems to have nine subunits (a, b, c, d, e, f, g, F6 and 8). This gene is one of three genes that encode subunit c of the proton channel. Each of the three genes have distinct mitochondrial import sequences but encode the identical mature protein. Alternatively spliced transcript variants encoding the same protein have been identified.

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Overview

Product Name	Anti-ATP5F1,2,3/ATP5MC1,2,3 Picoband® Antibody (monoclonal, 12E9)
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-ATP5F1,2,3/ATP5MC1,2,3 Picoband® Antibody (monoclonal, 12E9) catalog # M09735. Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, WB
Clonality	Monoclonal 12E9
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
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	Mouse
Uniprot ID	P05496

Technical Details

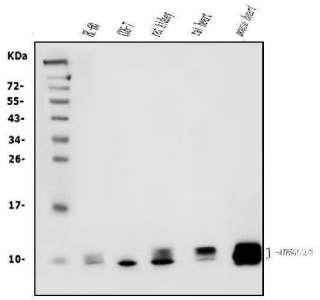
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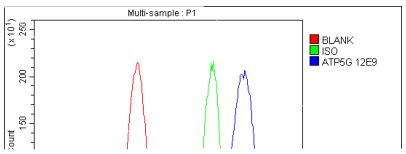
Immunogen	E.coli-derived human ATP5G1,2,3/ATP5MC1,2,3 recombinant protein (Position: D62-L113).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Human, Mouse, Rat, Monkey Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human, Mouse, Rat Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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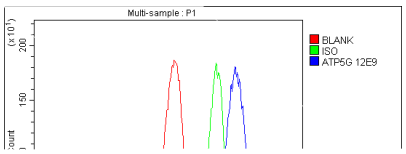
Anti-ATP5F1,2,3/ATP5MC1,2,3 Picoband® Antibody (monoclonal, 12E9) (M09735) Images



Western blot analysis of ATP5F1,2,3/ATP5MC1,2,3 using anti-ATP5F1,2,3/ATP5MC1,2,3 antibody (M09735). 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: human HL-60 whole cell lysates, Lane 2: monkey COS-7 whole cell lysates, Lane 3: rat kidney tissue lysates, Lane 4: rat heart tissue lysates, Lane 5: mouse heart tissue 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 mouse anti-ATP5F1,2,3/ATP5MC1,2,3 antigen affinity purified monoclonal antibody (Catalog # M09735) 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-mouse 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 # EK1001) with Tanon 5200 system. A specific band was detected for ATP5F1,2,3/ATP5MC1,2,3 at approximately 10-14KD. The expected band size for ATP5F1,2,3/ATP5MC1,2,3 is at 10-14KD.



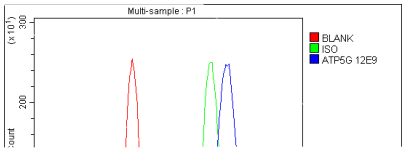
Flow Cytometry analysis of HEPA1-6 cells using anti-ATP5F1,2,3/ATP5MC1,2,3 antibody (M09735). Overlay histogram showing HEPA1-6 cells stained with M09735 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-ATP5F1,2,3/ATP5MC1,2,3 Antibody (M09735, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Flow Cytometry analysis of HEPG2 cells using anti-ATP5F1,2,3/ATP5MC1,2,3 antibody (M09735). Overlay histogram showing HEPG2 cells stained with M09735 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-ATP5F1,2,3/ATP5MC1,2,3 Antibody (M09735, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled sample without

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incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Flow Cytometry analysis of RH35 cells using anti-ATP5F1,2,3/ATP5MC1,2,3 antibody (M09735). Overlay histogram showing RH35 cells stained with M09735 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-ATP5F1,2,3/ATP5MC1,2,3 Antibody (M09735, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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