BOSTER BIOLOGICAL TECHNOLOGY
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Anti-AMPK alpha 1/PRKAA1 Antibody Picoband®

Catalog Number: A00994-6

About PRKAA1

5'-AMP-activated protein kinase catalytic subunit alpha-1 is an enzyme that in humans is encoded by the PRKAA1 gene. The protein encoded by this gene belongs to the ser/thr protein kinase family. It is the catalytic subunit of the 5'-prime-AMP-activated protein kinase (AMPK). AMPK is a cellular energy sensor conserved in all eukaryotic cells. The kinase activity of AMPK is activated by the stimuli that increase the cellular AMP/ATP ratio. AMPK regulates the activities of a number of key metabolic enzymes through phosphorylation. It protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways.

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Overview

Product Name	Anti-AMPK alpha 1/PRKAA1 Antibody Picoband®
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-AMPK alpha 1/PRKAA1 Antibody Picoband® catalog # A00994-6. Tested in ELISA, 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	ELISA, Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg 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	Q13131

Technical Details

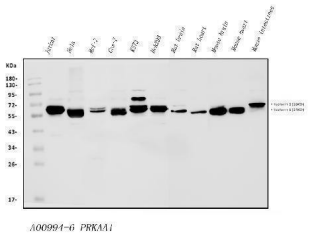
Immunogen	E.coli-derived human AMPK alpha 1/PRKAA1 recombinant protein (Position: D359-P539).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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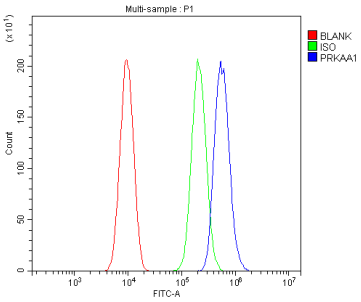
	blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.25ug/ml, Human, Mouse, Rat, Monkey Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, - 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-AMPK alpha 1/PRKAA1 Antibody Picoband® (A00994-6) Images



Western blot analysis of AMPK alpha 1/PRKAA1 using anti-AMPK alpha 1/PRKAA1 antibody (A00994-6). 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 Jurkat whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human MCF-7 whole cell lysates, Lane 4: monkey Cos-7 whole cell lysates, Lane 5: human K572 whole cell lysates, Lane 6: human HEK293 whole cell lysates, Lane 7: rat brain tissue lysates, Lane 8: rat heart tissue lysates, Lane 9: mouse brain tissue lysates, Lane 10: mouse heart tissue lysates, Lane 11: mouse intestines 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 rabbit anti-AMPK alpha 1/PRKAA1 antigen affinity purified polyclonal antibody (Catalog # A00994-6) at 0.25 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 AMPK alpha 1/PRKAA1 at approximately 64-66KD. The expected band size for AMPK alpha 1/PRKAA1 is at 64KD.



Flow Cytometry analysis of SiHa cells using anti-AMPK alpha 1/PRKAA1 antibody (A00994-6). Overlay histogram showing SiHa cells stained with A00994-6 (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 rabbit anti-AMPK alpha 1/PRKAA1 Antibody (A00994-6, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit 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.

2 Publications Citing This Product

1. PubMed ID: 10.1002/jcb.26275, Effect of metformin on ossification and inflammation of fibroblasts in ankylosing spondylitis: An in vitro study

2. PubMed ID: 10.1002/jcb.26275, Effect of metformin on ossification and inflammation of fibroblasts in ankylosing spondylitis: An in vitro study

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