

## 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.

### Overview

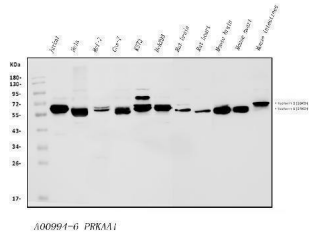
Product Name	Anti-AMPK alpha 1/PRKAA1 Antibody Picoband®
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-AMPK alpha 1/PRKAA1 Antibody Picoband® catalog # A00994-6. Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat. The brand Picoband 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 Na <sub>2</sub> HPO <sub>4</sub> , 0.01mg NaN <sub>3</sub> .
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

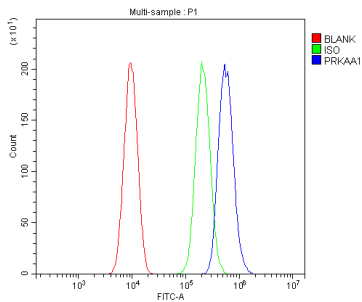
Immunogen	E.coli-derived human AMPK alpha 1/PRKAA1 recombinant protein (Position: D359-P539).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	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 <sup>6</sup> cells, Human ELISA, 0.1-0.5ug/ml, -

## 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/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

### 1 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

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### Anti-AMPK alpha 1/PRKAA1 Antibody

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