

## Anti-PGC1 beta/PPARGC1B Picoband® Antibody

Catalog Number: A02933-1

### About PPARGC1B

Peroxisome proliferator-activated receptor gamma coactivator 1-beta is a protein that in humans is encoded by the PPARGC1B gene. It is mapped to 5q32. The protein encoded by this gene stimulates the activity of several transcription factors and nuclear receptors, including estrogen receptor alpha, nuclear respiratory factor 1, and glucocorticoid receptor. The encoded protein may be involved in fat oxidation, non-oxidative glucose metabolism, and the regulation of energy expenditure. This protein is downregulated in prediabetic and type 2 diabetes mellitus patients. Certain allelic variations in this gene increase the risk of the development of obesity. Three transcript variants encoding different isoforms have been found for this gene.

### Overview

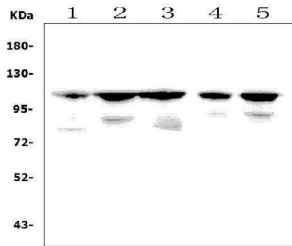
Product Name	Anti-PGC1 beta/PPARGC1B Picoband® Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-PGC1 beta/PPARGC1B Picoband® Antibody catalog # A02933-1. Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates 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> , 0.05mg 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	Q86YN6

### Technical Details

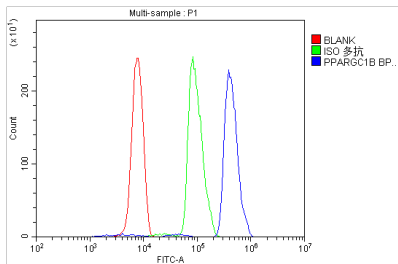
Immunogen	E.coli-derived human PGC1 beta/PPARGC1B recombinant protein (Position: A8-P375).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

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 Flow Cytometry (Fixed), 1-3ug/1x10 <sup>6</sup> cells, Human, Mouse ELISA, 0.1-0.5ug/ml, -

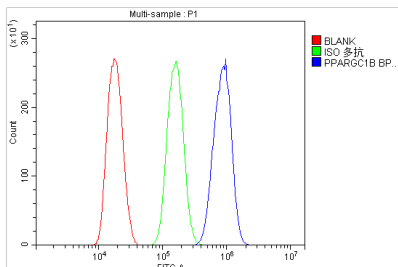
## Anti-PGC1 beta/PPARGC1B Picoband® Antibody (A02933-1) Images



Western blot analysis of PPARGC1B using anti-PPARGC1B antibody (A02933-1). 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 Caco-2 whole cell lysates, Lane 2: human HEK293 whole cell lysates, Lane 3: human U2OS whole cell lysates. Lane 4: human MDA-MB-453 whole cell lysates, Lane 5: human K562 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-PPARGC1B antigen affinity purified polyclonal antibody (Catalog # A02933-1) 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 PPARGC1B at approximately 113KD. The expected band size for PPARGC1B is at 113KD.



Flow Cytometry analysis of U937 cells using anti-PPARGC1B antibody (A02933-1). Overlay histogram showing U937 cells stained with A02933-1 (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-PPARGC1B Antibody (A02933-1, 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.



Flow Cytometry analysis of HEP1-6 cells using anti-PPARGC1B antibody (A02933-1). Overlay histogram showing HEP1-6 cells stained with A02933-1 (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-PPARGC1B Antibody (A02933-1, 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.

## 2 Publications Citing This Product

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1. PubMed ID: 10.1016/j.bbamcr.2011.03.017, Mitogen-activated protein kinase kinases promote mitochondrial biogenesis in part through inducing peroxisome proliferator-activated receptor gamma coactivator-1beta expression

2. PubMed ID: 10.1111/j.1476-5381.2010.00900.x, Troglitazone induces cytotoxicity in part by promoting the degradation of peroxisome proliferator-activated receptor gamma co-activator-1alpha protein

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