

# Anti-PGC1 alpha + beta antibody [EPR18289] ab188102

Recombinant RabMAb

[5 References](#) [8 Images](#)

### Overview

<b>Product name</b>	Anti-PGC1 alpha + beta antibody [EPR18289]
<b>Description</b>	Rabbit monoclonal [EPR18289] to PGC1 alpha + beta
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human, Recombinant fragment
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Recombinant fragment of Human PGC1 alpha protein; Recombinant fragment of Human PGC1 beta protein; Human skeletal muscle lysate, HeLa cell lysate and mouse colon lysate; Human fetal heart lysate, Human fetal kidney lysate, Mouse thymus lysate and Rat thymus lysate; Mouse brain and heart lysates; Rat brain and heart lysates; C6 and NIH/3T3 cell lysates; Mouse kidney lysate and rat kidney lysate; Human skeletal muscle lysate.
<b>General notes</b>	<p>This product may be covered by one or more of the following U.S. Patents.</p> <p>6,166,192 6,426,411 6,525,178 6,872,391 6,908,987 7,250,283 7,091,006 7,354,738 8,105,774 8,445,233</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

## Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR18289
<b>Isotype</b>	IgG

## Applications

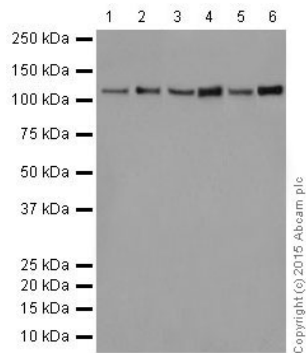
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab188102 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 113 kDa (predicted molecular weight: 91, 113 kDa).

## Target

<b>Relevance</b>	PGC1 alpha - The protein encoded by this gene is a transcriptional coactivator that regulates the genes involved in energy metabolism. This protein interacts with PPARGgamma, which permits the interaction of this protein with multiple transcription factors. This protein can interact with, and regulate the activities of cAMP response element binding protein (CREB) and nuclear respiratory factors (NRFs). It provides a direct link between external physiological stimuli and the regulation of mitochondrial biogenesis, and is a major factor that regulates muscle fiber type determination. This protein may be also involved in controlling blood pressure, regulating cellular cholesterol homoeostasis, and the development of obesity (referenced from entrez gene). PGC1 beta - Plays a role of stimulator of transcription factors and nuclear receptors activities. Activates transcriptional activity of estrogen receptor alpha, nuclear respiratory factor 1 (NRF1) and glucocorticoid receptor in the presence of glucocorticoids. May play a role in constitutive non-adrenergic-mediated mitochondrial biogenesis as suggested by increased basal oxygen consumption and mitochondrial number when overexpressed. May be involved in fat oxidation and non-oxidative glucose metabolism and in the regulation of energy expenditure.
<b>Cellular localization</b>	Nucleus

## Images



Western blot - Anti-PGC1 alpha + beta antibody  
[EPR18289] (ab188102)

**All lanes :** Anti-PGC1 alpha + beta antibody [EPR18289]  
(ab188102) at 1/10000 dilution

**Lane 1 :** Mouse brain tissue lysate

**Lane 2 :** Mouse heart tissue lysate

**Lane 3 :** Rat brain tissue lysate

**Lane 4 :** Rat heart tissue lysate

**Lane 5 :** C6 (Rat glial tumor cell line) whole cell lysate

**Lane 6 :** NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell  
lysate

Lysates/proteins at 10 µg per lane.

### Secondary

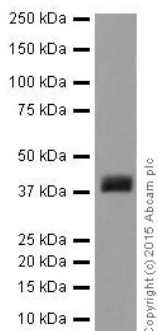
**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at  
1/1000 dilution

**Predicted band size:** 91, 113 kDa

**Observed band size:** 113 kDa

**Exposure time:** 1 minute

5% NFDM/TBST: Blocking and diluting buffer.



Western blot - Anti-PGC1 alpha + beta antibody  
[EPR18289] (ab188102)

Anti-PGC1 alpha + beta antibody [EPR18289] (ab188102) at  
1/100000 dilution + Recombinant fragment of Human PGC1 alpha  
protein at 0.01 µg

### Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000  
dilution

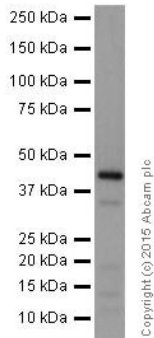
**Predicted band size:** 91, 113 kDa

**Observed band size:** 38 kDa

**Exposure time:** 1 minute

5% NFDM/TBST: Blocking and diluting buffer.

Recombinant fragment of human PGC1 alpha protein contains aa459-798 with His-Tag®.



Western blot - Anti-PGC1 alpha + beta antibody [EPR18289] (ab188102)

Anti-PGC1 alpha + beta antibody [EPR18289] (ab188102) at 1/100000 dilution + Recombinant fragment of Human PGC1 beta protein at 0.01 µg

#### Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

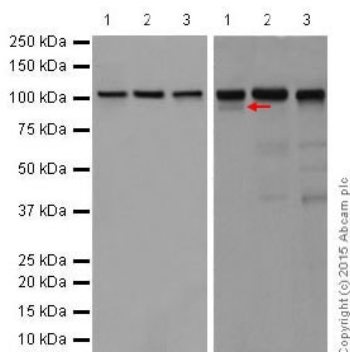
**Predicted band size:** 91, 113 kDa

**Observed band size:** 30 kDa

**Exposure time:** 15 seconds

5% NFDm/TBST: Blocking and diluting buffer.

Recombinant fragment of human PGC1 beta protein contains aa751-1023 with His-Tag®.



Exposure time: 30 seconds 1 minute

Western blot - Anti-PGC1 alpha + beta antibody [EPR18289] (ab188102)

**All lanes :** Anti-PGC1 alpha + beta antibody [EPR18289] (ab188102) at 1/1000 dilution

**Lane 1 :** Human skeletal muscle tissue lysate

**Lane 2 :** HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate

**Lane 3 :** Mouse colon tissue lysate

Lysates/proteins at 20 µg per lane.

#### Secondary

**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

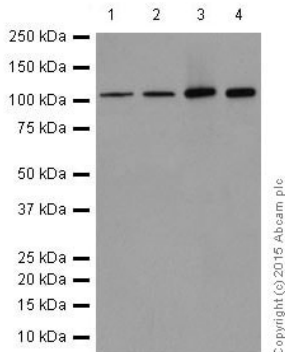
**Predicted band size:** 91, 113 kDa

**Observed band size:** 90, 113 kDa

5% NFDm/TBST: Blocking and diluting buffer.

The composite image shows duplicate western blots with different

exposure times. A 90 KDa band (arrow), likely to be PGC1 alpha, is detected at a longer exposure time (1 min). It has been reported that the skeletal muscle, heart and kidney have a higher expression level of PGC1 alpha than other tissues (Kressler et al. 2002, J. Biol. Chem. 277, 13918–13925).



Western blot - Anti-PGC1 alpha + beta antibody [EPR18289] (ab188102)

**All lanes :** Anti-PGC1 alpha + beta antibody [EPR18289] (ab188102) at 1/10000 dilution

**Lane 1 :** Human fetal heart tissue lysate

**Lane 2 :** Human fetal kidney tissue lysate

**Lane 3 :** Mouse thymus tissue lysate

**Lane 4 :** Rat thymus tissue lysate

Lysates/proteins at 10 µg per lane.

### Secondary

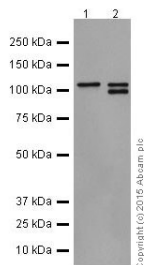
**All lanes :** Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

**Predicted band size:** 91, 113 kDa

**Observed band size:** 113 kDa

**Exposure time:** 3 minutes

5% NFDM/TBST: Blocking and diluting buffer.



Western blot - Anti-PGC1 alpha + beta antibody [EPR18289] (ab188102)

**All lanes :** Anti-PGC1 alpha + beta antibody [EPR18289] (ab188102) at 1/1000 dilution

**Lane 1 :** Mouse kidney lysate

**Lane 2 :** Rat kidney lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

**Predicted band size:** 91, 113 kDa

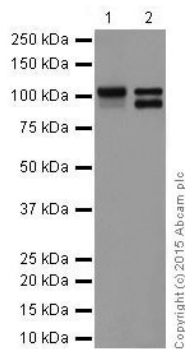
**Observed band size:** 113 kDa

**Exposure time:** 5 seconds

5% NFDM/TBST: Blocking and diluting buffer.

A high expression level of PGC1 alpha in the kidney has been reported (Kressler et al. 2002, J. Biol. Chem. 277, 13918–13925).

The lower band in lane 2 is likely to be the alpha form.



Western blot - Anti-PGC1 alpha + beta antibody  
[EPR18289] (ab188102)

**All lanes :** Anti-PGC1 alpha + beta antibody [EPR18289]  
(ab188102) at 1/1000 dilution

**Lane 1 :** Human skeletal muscle lysate

**Lane 2 :** Rat kidney lysate

Lysates/proteins at 20 µg per lane.

#### **Secondary**

**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at  
1000 µg

**Predicted band size:** 91, 113 kDa

**Observed band size:** 113 kDa

**Exposure time:** 1 minute

5% NFDM/TBST: Blocking and diluting buffer.

A high expression level of PGC1 alpha in the kidney has been reported (Kressler et al. 2002, J. Biol. Chem. 277, 13918–13925).

The lower band in lane 2 is likely to be the alpha form.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
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Anti-PGC1 alpha + beta antibody [EPR18289]  
(ab188102)

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