

Product datasheet

Anti-PGC1 alpha antibody ab77210

★★★★☆ 2 Abreviews 7 References 3 Images

Overview

Product name	Anti-PGC1 alpha antibody
Description	Mouse monoclonal to PGC1 alpha
Host species	Mouse
Specificity	The immunogen sequence for this antibody is 55% homologous with PGC1 beta (Uniprot: Q86YN6).
Tested applications	Suitable for: WB, Flow Cyt, ELISA
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment corresponding to Human PGC1 alpha aa 689-799. Database link: Q9UBK2
Positive control	PGC1 alpha transfected U2OS cell lysate
General notes	This product was changed from ascites to tissue culture supernatant on 12/3/19. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Constituent: 2.68% PBS
Purity	Tissue culture supernatant
Clonality	Monoclonal
Isotype	IgG2b
Light chain type	kappa

Applications

Our [Abpromise guarantee](#) covers the use of **ab77210** in the following tested applications.

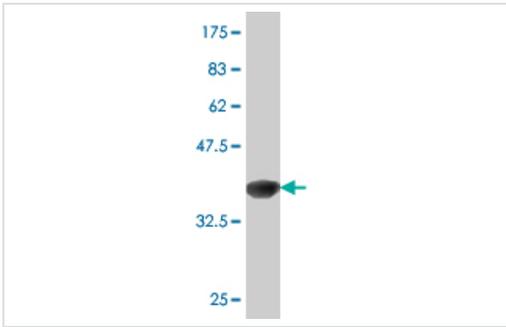
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆	Use at an assay dependent concentration. Detects a band of approximately 91 kDa (predicted molecular weight: 91 kDa).
Flow Cyt		Use at an assay dependent concentration. ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.
ELISA		Use at an assay dependent concentration.

Target

Function	Transcriptional coactivator for steroid receptors and nuclear receptors. Greatly increases the transcriptional activity of PPARG and thyroid hormone receptor on the uncoupling protein promoter. Can regulate key mitochondrial genes that contribute to the program of adaptive thermogenesis. Plays an essential role in metabolic reprogramming in response to dietary availability through coordination of the expression of a wide array of genes involved in glucose and fatty acid metabolism. Induces the expression of PERM1 in the skeletal muscle in an ESRRA-dependent manner. Also involved in the integration of the circadian rhythms and energy metabolism. Required for oscillatory expression of clock genes, such as ARNTL/BMAL1 and NR1D1, through the coactivation of RORA and RORC, and metabolic genes, such as PDK4 and PEPCK.
Tissue specificity	Heart, skeletal muscle, liver and kidney. Expressed at lower levels in brain and pancreas and at very low levels in the intestine and white adipose tissue. In skeletal muscle, levels were lower in obese than in lean subjects and fasting induced a 2-fold increase in levels in the skeletal muscle in obese subjects.
Sequence similarities	Contains 1 RRM (RNA recognition motif) domain.
Post-translational modifications	Phosphorylation by AMPK in skeletal muscle increases activation of its own promoter. Phosphorylated by CLK2. Heavily acetylated by GCN5 and biologically inactive under conditions of high nutrients. Deacetylated by SIRT1 in low nutrients/high NAD conditions. Ubiquitinated. Ubiquitination by RNF34 induces proteasomal degradation.
Cellular localization	Cytoplasm. Nucleus; Nucleus and Nucleus. Nucleus, PML body.

Images



Western blot - Anti-PGC1 alpha antibody (ab77210)

Anti-PGC1 alpha antibody (ab77210) at 1 µg/ml + Recombinant fragment of human PGC1 alpha at 0.1 µg

Secondary

Goat anti-Mouse IgG (H&L)-HRP at 1/2500 dilution

Developed using the ECL technique.

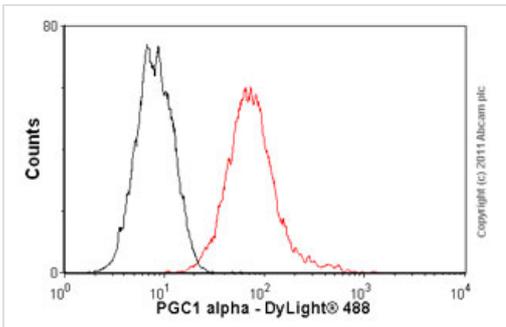
Predicted band size: 91 kDa

Observed band size: 38 kDa

[why is the actual band size different from the predicted?](#)

Western blot against tagged recombinant protein immunogen using ab77210 antibody at 1/500 dilution. Predicted band size of immunogen is 92kDa.

This image was generated using the ascites version of the product.

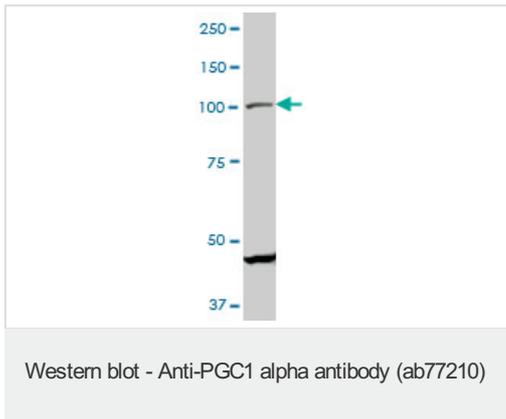


Flow Cytometry - Anti-PGC1 alpha antibody (ab77210)

Overlay histogram showing HEK293 cells stained with ab77210 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab77210, 1µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (ab91366, 2µg/1x10⁶ cells) used under the same conditions.

Acquisition of >5,000 events was performed. This antibody gave a positive signal in HEK293 cells fixed with 4% paraformaldehyde/permeabilized in 0.1% PBS-Tween used under the same conditions.

This image was generated using the ascites version of the product.



Anti-PGC1 alpha antibody (ab77210) at 1 µg/ml + PGC1 alpha transfected U2OS cell lysate at 25 µg

Secondary

Goat anti-Mouse IgG (H&L)-HRP at 1/2500 dilution

Developed using the ECL technique.

Predicted band size: 91 kDa

Observed band size: 91 kDa

Additional bands at: 45 kDa. We are unsure as to the identity of these extra bands.

This image was generated using the ascites version of the product.

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