

# Human PGC1 alpha antibody

Catalog Number: ATGA0466

## PRODUCT INFORMATION

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**Catalog number**

ATGA0466

**Clone No.**

AT25C8

**Product type**

Monoclonal Antibody

**UnitProt No.**

Q9UBK2

**NCBI Accession No.**

NP\_037393

**Alternative Names**

Peroxisome proliferator-activated receptor gamma coactivator 1-alpha, PGC-1-alpha, PPAR-gamma coactivator 1-alpha, PPARGC-1-alpha, Ligand effect modulator 6, PPARGC1A, LEM6, PGC1, PGC1A, PPARGC1

## PRODUCT SPECIFICATION

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**Antibody Host**

Mouse

**Reacts With**

Human

**Concentration**

1mg/ml (determined by BCA assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

**Immunogen**

Recombinant human PPARGC1A (300-540aa) purified from E. coli

**Isotype**

IgG2a kappa

**Purification Note**

By protein-A affinity chromatography

**Application**

ELISA, WB, ICC/IF, FACS

**Usage**

The antibody has been tested by ELISA, Western blot, ICC/IF and FACS analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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## Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

### Description

PPARGC1A is transcriptional coactivator for steroid receptors and nuclear receptors. Greatly increases the transcriptional activity of PPARG and thyroid hormone receptor on the uncoupling protein promoter. This protein can regulate key mitochondrial genes that contribute to the program of adaptive thermogenesis and 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. Also, induces the expression of PERM1 in the skeletal muscle in an ESRRB-dependent manner and involved in the integration of the circadian rhythms and energy metabolism. They 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.

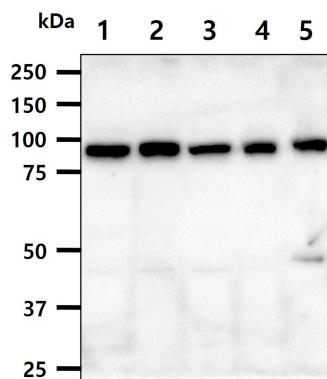
### General References

Lui Z., et al. (2016) Sci Rep. 6: 21382.

Li R., et al. (2016) Med Sci Monit. 22: 3229-3237.

## DATA

### Western blot analysis (WB)



The cell and tissue lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human PPARGC1A antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

Lane 1.: HeLa cell lysate

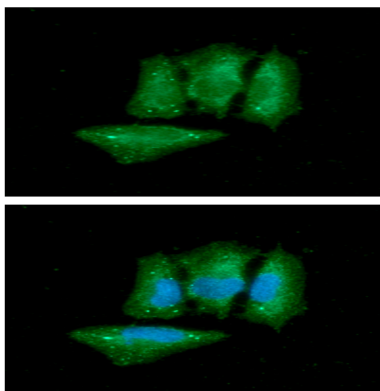
Lane 2.: MCF7 cell lysate

Lane 3.: HepG2 cell lysate

Lane 4.: 293T cell lysate

Lane 5.: Mouse brain tissue lysate

### Immunocytochemistry/Immunofluorescence (ICC/IF)

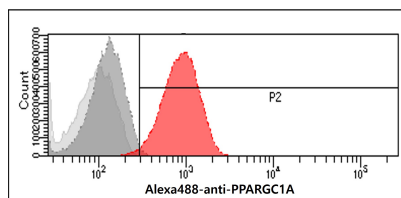


ICC/IF analysis of PPARGC1A in HeLa cells. The cell was stained with ATGA0466 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

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## Flow cytometry (FACS)



Flow cytometry analysis of PPARGC1A in HeLa cells. The cell was stained with ATGA0466 at 2-5ug for 1x10<sup>6</sup> cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (dark gray), cells without incubation with primary and secondary antibody was used as the negative control (light gray).