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Human PGC1 alpha antibody

Catalog Number: ATGA0466

PRODUCT INFORMATION

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

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

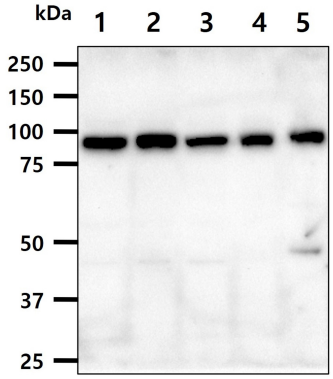
PPARGC1A is transcriptional coactivator for steroid receptors and nuclear receptors. Greatly increases the transcriptional activity of PPARG and thyroid hormone receptor on the uncoupling protein promoter. This protein can regulate key mitochondrial genes that contribute to the program of adaptive thermogenesis 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 ESRRA-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.

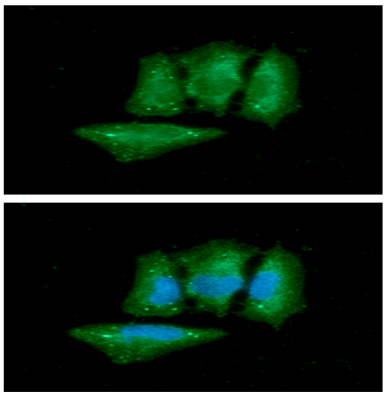
DATA

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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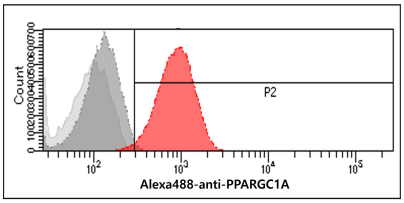
Flow cytometry (FACS)



Flow cytometry analysis of PPARGC1A in HeLa cells. The cell was stained with ATGA0466 at 2-5ug for 1x106cells (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).