10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

PPARGC1B Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1943a

Specification

PPARGC1B Antibody - Product Information

Application	**E, WB, FC**
Primary Accession	Q86YN6
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**113.2kDa KDa**

Description
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.

Immunogen
Purified recombinant fragment of human PPARGC1B (AA: 195-414) expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide.

PPARGC1B Antibody - Additional Information

Gene ID 133522

Other Names
Peroxisome proliferator-activated receptor gamma coactivator 1-beta, PGC-1-beta, PPAR-gamma coactivator 1-beta, PPARGC-1-beta, PGC-1-related estrogen receptor alpha coactivator, PPARGC1B, PERC, PGC1, PGC1B, PPARGC1

Dilution
E~~1/10000
WB~~1/500 - 1/2000
FC~~1/200 - 1/400

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
PPARGC1B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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PPARGC1B Antibody - Protein Information

Name PPARGC1B

Synonyms PERC, PGC1, PGC1B, PPARGC1

Function
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. Induces the expression of PERM1 in the skeletal muscle in an ESRRA-dependent manner.

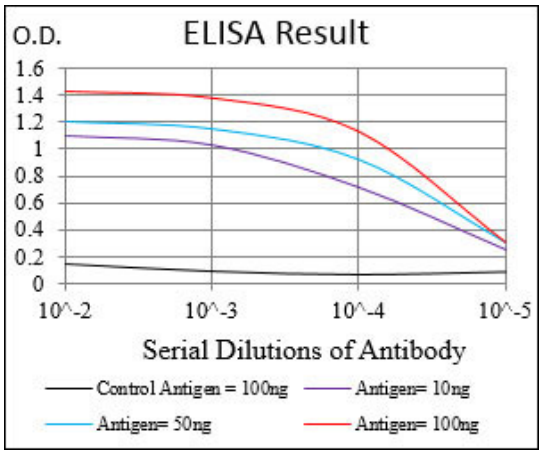
Cellular Location
Nucleus.

Tissue Location
Ubiquitous with higher expression in heart, brain and skeletal muscle.

PPARGC1B Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture



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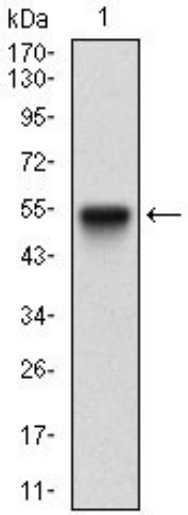

Figure 1: Western blot analysis using PPARGC1B mAb against human PPARGC1B (AA: 195-414) recombinant protein. (Expected MW is 50.3 kDa)

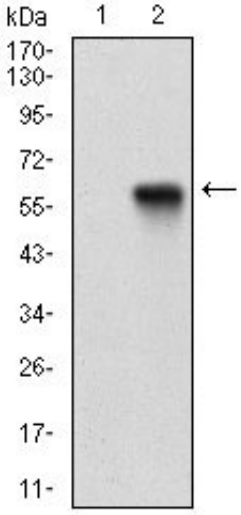

Figure 2: Western blot analysis using PPARGC1B mAb against HEK293 (1) and PPARGC1B (AA: 195-414)-hIgGFc transfected HEK293 (2) cell lysate.

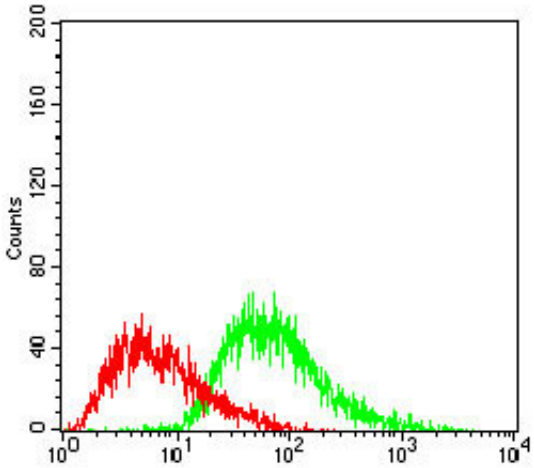

Figure 3: Flow cytometric analysis of Hela cells using PPARGC1B mouse mAb (green) and negative control (red).

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PPARGC1B Antibody - Background

C17orf53 (chromosome 17 open reading frame 53) is a 647 amino acid protein that is encoded by a gene mapping to human chromosome 17. Chromosome 17 makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes. Chromosome 17 is also linked to neurofibromatosis, a condition characterized by neural and epidermal lesions, and dysregulated Schwann cell growth. Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are also associated with chromosome 17. ; ; ;

PPARGC1B Antibody - References

1. Am J Physiol Endocrinol Metab. 2011 Jul;301(1):E155-63.2. J Biol Chem. 2009 Jul 24;284(30):19945-52.