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PPARG Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1186a

Product Information

Application	WB, E
Primary Accession	P37231
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3A4A9; 1E6A1
Isotype	IgG1
Calculated MW	57620
Description	PPARG: peroxisome proliferator-activated receptor gamma. This gene encodes a member of the peroxisome proliferator-activated receptor (PPAR) subfamily of nuclear receptors. PPARs form heterodimers with retinoid X receptors (RXRs) and these heterodimers regulate transcription of various genes. Three subtypes of PPARs are known: PPAR-alpha, PPAR-delta, and PPAR-gamma. The protein encoded by this gene is PPAR-gamma and is a regulator of adipocyte differentiation. Additionally, PPAR-gamma has been implicated in the pathology of numerous diseases including obesity, diabetes, atherosclerosis and cancer. Alternatively spliced transcript variants that encode different isoforms have been described.
Immunogen	Purified recombinant fragment of PPARG (aa170-270) expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	5468
Other Names	Peroxisome proliferator-activated receptor gamma, PPAR-gamma, Nuclear receptor subfamily 1 group C member 3, PPARG, NR1C3
Dilution	WB~~1/500 - 1/2000 E~~N/A
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	PPARG Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PPARG
Synonyms	NR1C3
Function	Ligand-activated transcription factor that forms obligate heterodimers with the retinoic acid receptor and acts as a key regulator of biological processes, such as adipocyte differentiation, lipid metabolism, glucose homeostasis and beta-oxidation of fatty acids (PubMed:16150867, PubMed:20829347, PubMed:23525231, PubMed:8702406, PubMed:8706692, PubMed:9065481). Activated by lipid ligands: binds peroxisome proliferators, such as hypolipidemic drugs, and fatty acids, such as prostaglandin J2 metabolites (PubMed:16150867, PubMed:20829347, PubMed:23525231, PubMed:8702406, PubMed:8706692, PubMed:9065481). Ligand-binding results in a conformational change in the receptor, promoting dissociation of repressors and recruitment of coactivators, and subsequent activation of target gene expression (PubMed:16150867, PubMed:20829347, PubMed:23525231, PubMed:8702406, PubMed:8706692, PubMed:9065481). Specifically binds to DNA specific PPAR response elements (PPRE) and modulates the transcription of its target genes, such as acyl-CoA oxidase (By similarity). Acts as a critical regulator of gut homeostasis by suppressing NF-kappa-B-mediated pro-inflammatory responses (PubMed:20829347). Plays a role in the regulation of cardiovascular circadian rhythms by regulating the transcription of BMAL1 in the blood vessels (By similarity).
Cellular Location	Nucleus. Cytoplasm Note=Redistributed from the nucleus to the cytosol through a MAP2K1/MEK1-dependent manner (PubMed:17101779). NOCT enhances its nuclear translocation (By similarity). {ECO:0000250|UniProtKB:P37238, ECO:0000269|PubMed:17101779}
Tissue Location	Highest expression in adipose tissue. Lower in skeletal muscle, spleen, heart and liver. Also detectable in placenta, lung and ovary.

References

1. Sarcoidosis Vasc Diffuse Lung Dis. 2006 Jun;23(2):93-100 2. Hum Biol. 2007 Feb;79(1):111-9. 3. Hum Genet. 2008 Feb;123(1):35-40. Epub 2007 Nov 13.

Images

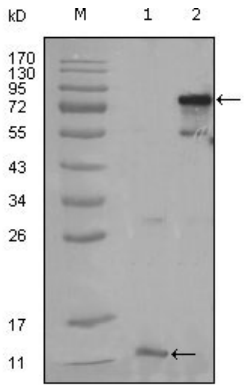


Figure 1: Western blot analysis using PPARG mouse mAb against truncated PPARG-His recombinant protein (1) and full-length PPARG(aa1-477) transfected CHO-K1 cell lysate (2).

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