

# Recombinant Mouse PPARG Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP51400

Size: 10ug, 100ug

Protein Name: Peroxisome proliferator-activated receptor gamma (PPAR-gamma) (Nuclear receptor subfamily 1 group C member 3)

Synonym: Pparg, Nr1c3

UniProt ID: P37238

UniProt Link: [www.uniprot.org/uniprotkb/P37238/entry](http://www.uniprot.org/uniprotkb/P37238/entry)

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 505 AA

Molecular Weight: 58 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MGETLGDSPVDPEHGAFADALPMSTSQEITMVDTEMPFWPTNFGISSVDLSVMEDHSHSFDIKPFTT  
VDFSSISAPHYEDIPFTRADPMVADYKYDLKLQEYQSAIKVEPASPPYYSEKTQLYNRPHEEPSNSLM  
AIECRVCGDKASGFHYGVHACEGCKGFFRRTIRLKLIDRCDLNCRHKKSRNKCQYCRFQKCLAVG  
MSHNAIRFGRMPQAEKEKLLAEISSDIDQLNPESADLRALAKHLYDSYIKSFPLTKAKARAILTGKTTD  
KSPFVIYDMNSLMMGEDKIKFKHITPLQEQSKEVAIRIFQGCQFRSVEAVQEITEYAKNIPGFINLDLND  
QVTLLKYGVHEIYTMLASLMNKDGVLISEGQGFMTRFLKNLRKPFGDFMEPKFEFAVKFNALELDD  
SDLAIFIIVILSGDRPGLLNVPKPIEDIQDNLLQALELQLKLNHPSSQLFAKVLQKMTDLRQIVTEHVQL  
LHVIKKTETDMSLHPLLQEIKDLY

## 3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

## 4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

## 5. Product Description

This product is recombinant Peroxisome proliferator-activated receptor gamma (PPAR-gamma) (Nuclear receptor subfamily 1 group C member 3) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

**Protein 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:21035761, PubMed:23525231, PubMed:7838715, PubMed:7926726, PubMed:8041794, PubMed:8262913). Activated by lipid ligands: binds peroxisome proliferators, such as hypolipidemic drugs, and fatty acids, such as prostaglandin J2 metabolites (PubMed:21994940, PubMed:27197753, PubMed:8041794, PubMed:8262913). 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:21994940, PubMed:27197753, PubMed:8041794, PubMed:8262913). Specifically binds to DNA specific PPAR response elements (PPRE) and modulates the transcription of its target genes, such as acyl-CoA oxidase (PubMed:8041794, PubMed:8262913). Acts as a critical regulator of gut homeostasis by suppressing NF-kappa-B-mediated pro-inflammatory responses (By similarity). Plays a role in the regulation of cardiovascular circadian rhythms by regulating the transcription of BMAL1 in the blood vessels (PubMed:19041764).; [Isoform 2]: Nuclear receptor that acts as the key factor controlling the development of adipocytes (PubMed:10549290, PubMed:10549291, PubMed:10549292, PubMed:18719582, PubMed:21459326, PubMed:23473036, PubMed:7838715, PubMed:7926726, PubMed:8001151, PubMed:8521497, PubMed:8521498). Specifically activated by 15-deoxy-delta12,14-prostaglandin J2 ligand during early adipogenesis, driving differentiation of all types of adipocytes (white, beige and brown) (PubMed:7838715, PubMed:7926726, PubMed:8521497, PubMed:8521498). Acts together with retinoic acid receptor RXRA, forming the ARF6 complex, which acts as a key regulator of the tissue-specific adipocyte P2 (aP2) enhancer (PubMed:7838715). Following recruitment of TLE3, promotes differentiation of white adipocytes (PubMed:21459326, PubMed:23473036). Following recruitment of PRDM16, promotes differentiation of myoblastic precursors into brown adipose cells (BAT), which are specialized in dissipating energy in the form of heat in response to cold or excess feeding (PubMed:18719582, PubMed:24703692, PubMed:40355558). Also mediates differentiation of white adipocytes into beige adipocytes by mediating recruitment of PRDM16 (PubMed:22405074).

**Subcellular Localization:** Nucleus . Cytoplasm . Note=Redistributed from the nucleus to the cytosol through a MAP2K1/MEK1-dependent manner (By similarity). NOCT enhances its nuclear translocation (PubMed:20498072).; [Isoform 2]: Nucleus .

## 6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.