



Human peroxisome proliferator-activated receptor gamma (PPAR γ) ELISA kit (1-300 ng/mL)

Cat. No.:	0126WXX-1532
Assay Type:	Quantitative sandwich ELISA
Target Species:	Human
Assay Target:	PPAR γ
Size:	48T; 96T

This product is for research use only and is not intended for diagnostic use.

Product Overview

Description

Human peroxisome proliferator-activated receptor gamma (PPAR γ) ELISA kit (1-300 ng/mL) is an ELISA-based *in vitro* research tool designed specifically for the quantitative detection of PPAR γ in human samples with a range of 1-300 ng/mL and a minimum detectable dose (sensitivity) of 0.48 ng/mL. The kit is highly sensitive and easy to use.

Assay Principle

The ELISA analytical biochemical technique is based on PPAR γ antibody-PPAR γ antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect PPAR γ antigen targets in samples.



Background

PPAR-gamma (Peroxisome Proliferator-Activated Receptor Gamma), a prominent member of the nuclear hormone receptor superfamily located at chromosomal position 3p 25, functions as a master ligand-dependent transcription factor essential for adipogenesis, lipid homeostasis, and glucose metabolism. Preferentially expressed in adipocytes, vascular smooth muscle cells, and macrophages, this DNA-binding nuclear receptor operates as a heterodimer with the retinoid X receptor and interacts with coactivators such as NCOA6 to significantly enhance the transcription of target genes. Its biological activity, which is modulated by MAP kinase-mediated phosphorylation and insulin stimuli, governs critical processes including white and brown fat cell differentiation, long-chain fatty acid transport, and the regulation of systemic insulin sensitivity. Beyond its primary metabolic roles, PPAR-gamma serves as a receptor for fatty acids and hypolipidemic drugs, influencing diverse physiological pathways ranging from the negative regulation of inflammation and smooth muscle cell proliferation to the orchestration of circadian rhythms and blood pressure. Consequently, dysregulation or genetic variation in PPAR-gamma is fundamentally linked to the pathogenesis of obesity, non-insulin-dependent diabetes mellitus, and familial partial lipodystrophy, underscoring its pivotal role as a central hub in metabolic health and disease.

Synonyms

PPAR-G; PPARG1; PPARG2; NR1C3; Glitazone receptor; Nuclear receptor subfamily 1 group C member 3; PPARG; Peroxisome proliferator activated receptor gamma; PPAR- γ ; Peroxisome proliferator-activated receptor γ

Formula Weight

54,681 Da

Applications

Human peroxisome proliferator-activated receptor gamma (PPAR γ) ELISA kit (1-300 ng/mL) is used to quantify PPAR γ in serum, plasma, cell culture supernatant, cell lysates, and tissue homogenates of human, providing data to support research in a wide range of areas, including metabolic pathway, endocrinology, cardiovascular biology, developmental science, bone metabolism, obesity, and others.

Research Area

Metabolic pathway; Endocrinology; Cardiovascular biology; Developmental science; Bone metabolism; Obesity

Specification

Sample Type	Serum; Plasma; Cell culture supernatants; Cell lysates; Tissue homogenates
Detection Range	1-300 ng/mL
Sensitivity	0.48 ng/mL
Precision (Intra-assay)	CV<8%
Precision (Inter-assay)	CV<10%
Cross-reactivity	No significant cross-reactivity or interference was observed.
Stability	6 months
Storage	Store at 2-8°C.