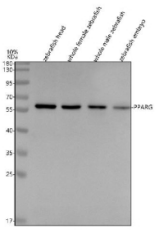
Zebrafish Ppar gamma Antibody / Pparg (RZ1276)

Catalog No.	Formulation	Size
RZ1276	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	A6XMH6
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Ppar gamma antibody is available for research use only.



Western blot analysis of Ppar gamma protein using Zebrafish Ppar gamma antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~60 kDa.

Description

The Zebrafish Ppar gamma antibody targets Ppar gamma (also known as Pparg), a nuclear receptor essential for lipid metabolism, adipogenesis, glucose regulation, and energy homeostasis in Danio rerio. Zebrafish, also known as Danio rerio, express pparg in metabolically active tissues including liver, intestine, adipose-like depots, skeletal muscle, and developing macrophage lineages. Ppar gamma localizes to the nucleus, where it functions as a ligand-activated transcription factor that binds peroxisome proliferator response elements (PPREs) to regulate metabolic gene programs controlling lipid uptake, fatty acid storage, oxidative balance, and insulin sensitivity.

Ppar gamma belongs to the peroxisome proliferator-activated receptor family of nuclear receptors and contains a

conserved DNA-binding domain with zinc-finger motifs as well as a ligand-binding domain that responds to fatty acids and metabolic cues. In zebrafish embryos and larvae, pparg expression increases as metabolic networks mature, supporting intestinal differentiation, hepatic lipid handling, and early adipocyte formation. A Zebrafish Ppar gamma antibody is suitable for detecting nuclear expression in tissues undergoing metabolic specialization, lipid regulation, and transcriptional control of energy-related pathways.

Functionally, Ppar gamma plays a central role in lipid metabolism. It activates genes involved in triglyceride synthesis, lipid droplet formation, beta-oxidation, and lipoprotein transport. In zebrafish, Ppar gamma regulates hepatic steatosis responses, intestinal lipid absorption, adipocyte-like cell development, and glucose-lipid balance. It also influences inflammation and macrophage polarization by shifting immune cells toward anti-inflammatory, lipid-processing phenotypes. Perturbations in pparg expression can lead to metabolic stress, altered lipid accumulation, inflammatory dysregulation, and impaired energy homeostasis, making zebrafish a valuable model for metabolic disease, toxicology, and nutritional studies.

Structurally, zebrafish Ppar gamma contains a modular nuclear receptor architecture consisting of an N-terminal activation function domain, a DNA-binding region with zinc-finger motifs, a hinge domain, and a C-terminal ligand-binding region responsible for co-activator recruitment. The pparg gene maps to chromosome 6, with transcription regulated by dietary state, oxidative stress, developmental signaling, and endocrine pathways that regulate metabolic plasticity. Co-localization studies detect Ppar gamma in hepatocytes, intestinal epithelium, adipocyte-like cells, and macrophages, often overlapping with markers of lipid storage, metabolic enzyme activity, and inflammation-modulating pathways.

A Zebrafish Ppar gamma antibody is suitable for detecting Ppar gamma in studies focused on adipogenesis, lipid metabolism, glucose regulation, inflammatory control, and metabolic disease modeling in Danio rerio. Its nuclear localization allows researchers to map metabolic transcriptional programs, evaluate dietary or chemical impacts on lipid regulation, study obesity-related phenotypes, and analyze how endocrine or environmental factors shape metabolic homeostasis. Because zebrafish provide transparent developmental stages and strong metabolic responsiveness, Ppar gamma is widely used for examining lipid biology, insulin-related pathways, and metabolic adaptation. This antibody is supplied for research use by NSJ Bioreagents.

Application Notes

Optimal dilution of the Zebrafish Ppar gamma antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Ppar gamma recombinant protein (amino acids M1-D512) was used as the immunogen for the Zebrafish Ppar gamma antibody.

Storage

After reconstitution, the Zebrafish Ppar gamma antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.