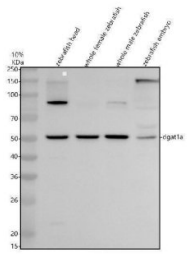
Zebrafish DGAT1 Antibody / Diacylglycerol O-Acyltransferase 1 Antibody (RZ1456)

Catalog No.	Formulation	Size
RZ1456	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Lyophilized from a buffered saline solution containing 2% trehalose. Reconstitute with 0.2 mL distilled water to yield a final antibody concentration of 500 ug/mL.
UniProt	Q6P3J0
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish DGAT1 Antibody / Diacylglycerol O-Acyltransferase 1 Antibody is available for research use only.



Zebrafish DGAT1 Antibody WB. Western blot analysis of DGAT1A expression was performed using anti-DGAT1A antibody. Electrophoresis was carried out on a 10% SDS-PAGE gel under reducing conditions. Lane 1: zebrafish head tissue lysate. Lane 2: whole female zebrafish tissue lysate. Lane 3: whole male zebrafish tissue lysate. Lane 4: zebrafish embryo tissue lysate. DGAT1A, also known as Diacylglycerol O-Acyltransferase 1A, catalyzes the final and committed step of triglyceride synthesis and plays an essential role in lipid storage and energy metabolism. A specific immunoreactive band is detected at approximately 50 kDa in all four samples, corresponding closely to the expected molecular weight of DGAT1A (~57 kDa). Similar expression in head, whole-body, and embryo lysates is consistent with the widespread requirement for triglyceride synthesis during growth and development. These results support the utility of Zebrafish DGAT1 Antibody for studies of lipid metabolism, energy homeostasis, and vertebrate development.

Description

Zebrafish DGAT1 Antibody / Diacylglycerol O-Acyltransferase 1 Antibody recognizes diacylglycerol O-acyltransferase 1 (DGAT1), an integral membrane enzyme that catalyzes the final and committed step in triglyceride synthesis. DGAT1

transfers fatty acyl groups from acyl-CoA to diacylglycerol, producing triacylglycerol for energy storage and lipid droplet formation. This enzyme belongs to the membrane-bound O-acyltransferase family and is highly conserved among vertebrates, making zebrafish an important model for investigating lipid metabolism and metabolic disease.

DGAT1 is expressed in tissues involved in nutrient absorption and lipid handling, including the intestine, liver, and developing embryos. In zebrafish, DGAT1 contributes to yolk lipid utilization and helps maintain cellular energy reserves during growth and development. By converting excess fatty acids into triglycerides, DGAT1 protects cells from lipotoxicity and supports normal lipid homeostasis. Alterations in DGAT1 activity can influence lipid droplet morphology, fatty acid metabolism, and overall energy balance.

The optical transparency and external development of zebrafish embryos provide a powerful system for studying lipid accumulation and transport in vivo. Zebrafish models have been used to investigate the effects of DGAT1 inhibition on obesity, hepatic steatosis, and intestinal lipid absorption. Changes in DGAT1 expression have also been associated with metabolic stress and altered nutrient utilization pathways. These studies highlight the importance of DGAT1 in regulating triglyceride synthesis and maintaining metabolic health.

Zebrafish DGAT1 Antibody / Diacylglycerol O-Acyltransferase 1 Antibody is useful for studying lipid droplet biology, triglyceride biosynthesis, energy metabolism, and nutrient utilization. It supports research involving obesity, fatty liver disease, developmental biology, and mechanisms governing neutral lipid storage. Zebrafish DGAT1 Antibody / Diacylglycerol O-Acyltransferase 1 Antibody provides a valuable tool for characterizing the expression and localization of this essential metabolic enzyme in zebrafish tissues and embryos.

Explore our DGAT1 Antibody / Triglyceride Synthesis Enzyme Antibody for additional information on this key regulator of triglyceride synthesis, lipid droplet formation, and metabolic homeostasis.

This Zebrafish antibody is part of a broader Zebrafish / Danio rerio antibody panel offered by NSJ Bioreagents.

Application Notes

The optimal working dilution of the Zebrafish DGAT1 Antibody / Diacylglycerol O-Acyltransferase 1 Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish DGAT1A recombinant protein (amino acids E21-D372) was used as the immunogen for the Zebrafish DGAT1A Antibody.

Storage

After reconstitution, the Zebrafish DGAT1A Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Zebrafish DGAT1 antibody, Zebrafish Diacylglycerol O-Acyltransferase 1 antibody, Zebrafish Acyl-CoA:Diacylglycerol Acyltransferase 1 antibody, Zebrafish Triglyceride Synthesis Enzyme antibody, Zebrafish Neutral Lipid Biosynthesis Enzyme antibody, Zebrafish TAG Synthesis Protein antibody