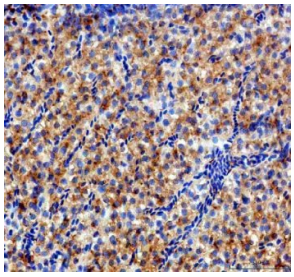
Zebrafish DIO3 Antibody / Iodothyronine Deiodinase 3 Antibody (RZ1417)

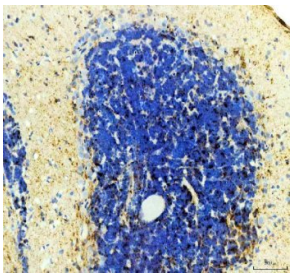
Catalog No.	Formulation	Size
RZ1417	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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	A0A8M1P485
Applications	Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish DIO3 Antibody / Iodothyronine Deiodinase 3 Antibody is available for research use only.



Zebrafish DIO3 Antibody Liver IHC. Immunohistochemical analysis of paraffin-embedded zebrafish liver tissue using Zebrafish DIO3 Antibody / Iodothyronine Deiodinase 3 Antibody demonstrates widespread cytoplasmic HRP-DAB brown staining throughout hepatocyte populations. The staining pattern is consistent with expression of DIO3A, a thyroid hormone-inactivating enzyme that regulates local concentrations of triiodothyronine (T3) and thyroxine (T4) to maintain endocrine homeostasis. Positive immunoreactivity within hepatic tissue highlights the important role of DIO3A in thyroid hormone metabolism, developmental regulation, and control of tissue-specific endocrine signaling. Heat-induced antigen retrieval was performed in EDTA buffer. Tissue sections were blocked with 10% goat serum and incubated with DIO3A antibody (2 ug/ml) overnight at 4Â°C, followed by Peroxidase Conjugated Goat Anti-rabbit IgG and DAB chromogen detection.



Zebrafish DIO3 Antibody Brain IHC. Immunohistochemical analysis of paraffin-embedded zebrafish brain tissue using Zebrafish DIO3 Antibody / Iodothyronine Deiodinase 3 Antibody demonstrates localized HRP-DAB brown staining within neural tissue surrounding densely cellular brain regions. The staining pattern is consistent with expression of DIO3A, a thyroid hormone-inactivating enzyme that regulates local availability of triiodothyronine (T3) and thyroxine (T4) during vertebrate development. DIO3A-mediated control of thyroid hormone signaling is essential for proper neurodevelopment, neuronal differentiation, and maintenance of endocrine homeostasis. Positive immunoreactivity within brain tissue supports the role of DIO3A in regulating tissue-specific thyroid hormone activity and developmental signaling pathways in the nervous system. Heat-induced antigen retrieval was performed in EDTA buffer. Tissue sections were blocked with 10% goat serum and incubated with DIO3A antibody (2 ug/ml) overnight at 4Â°C, followed by Peroxidase Conjugated Goat Anti-rabbit IgG and DAB chromogen detection.

Description

Zebrafish DIO3 Antibody / Iodothyronine Deiodinase 3 Antibody recognizes DIO3A, a member of the iodothyronine deiodinase family that regulates thyroid hormone activity through enzymatic inactivation of thyroxine (T4) and triiodothyronine (T3). DIO3 functions as the principal thyroid hormone-inactivating deiodinase and plays a critical role in maintaining appropriate hormone concentrations during embryonic development, tissue differentiation, and physiological homeostasis. Through its ability to control local thyroid hormone availability, DIO3 serves as an important regulator of growth, metabolism, and developmental timing.

Zebrafish DIO3 Antibody is widely used for studying endocrine signaling and vertebrate development. Thyroid hormones influence numerous biological processes, including nervous system maturation, organogenesis, skeletal development, metabolism, and cellular differentiation. DIO3 helps establish tissue-specific thyroid hormone gradients by limiting hormone activity in developing tissues and preventing excessive thyroid hormone signaling. As a result, DIO3 expression is frequently examined in studies investigating developmental regulation and endocrine control mechanisms.

Zebrafish DIO3 Antibody is also valuable for research involving neurodevelopment and tissue maturation. Precise regulation of thyroid hormone signaling is essential for normal brain development and neuronal differentiation. By controlling local concentrations of active thyroid hormones, DIO3 contributes to the coordination of developmental programs that influence cell proliferation, migration, and specialization. Expression analysis of DIO3 can therefore provide important insights into the molecular pathways that regulate vertebrate nervous system development and function.

Zebrafish DIO3 Antibody supports research involving thyroid hormone metabolism, endocrine biology, developmental signaling, and metabolic regulation. Because zebrafish embryos provide a powerful model for studying hormone-dependent developmental processes in vivo, DIO3 serves as an important marker for investigations of thyroid hormone homeostasis and tissue-specific regulation of endocrine pathways.

Zebrafish DIO3 Antibody is additionally relevant for studies of growth regulation, metabolic adaptation, and disease-associated alterations in thyroid hormone signaling. As the major thyroid hormone-inactivating enzyme, DIO3 remains an important target for understanding how endocrine signals coordinate vertebrate development, physiology, and cellular homeostasis.

Researchers studying thyroid hormone metabolism, endocrine regulation, and tissue-specific control of thyroid hormone signaling may also be interested in our DIO3 Antibody / Thyroid Hormone Metabolism Enzyme Antibody.

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 DIO3 Antibody / Iodothyronine Deiodinase 3 Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish DIO3A recombinant protein (amino acids D31-G235) was used as the immunogen for the Zebrafish DIO3A Antibody.

Storage

After reconstitution, the Zebrafish DIO3A 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 DIO3 Antibody, Zebrafish DIO3A Antibody, Zebrafish Iodothyronine Deiodinase 3 Antibody, Zebrafish Type III Deiodinase Antibody, Zebrafish Thyroid Hormone Deiodinase Antibody, Zebrafish Thyroid Hormone Metabolism Antibody

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