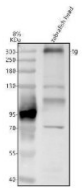
Zebrafish TG Antibody / Thyroglobulin (RZ1328)

Catalog No.	Formulation	Size
RZ1328	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	A0A193GP06
Applications	Western blot: 0.5-1ug/ml
Limitations	This Zebrafish TG Antibody / Thyroglobulin Antibody is available for research use only.



Zebrafish TG Antibody Thyroglobulin WB. Western blot analysis of zebrafish head tissue lysate using Zebrafish TG Antibody demonstrates a predominant high molecular weight band at approximately 300-305 kDa, consistent with the predicted molecular weight of Thyroglobulin / TG. Additional lower molecular weight immunoreactive bands are observed and may represent processed, partially degraded, or incompletely denatured thyroglobulin-related species commonly associated with large glycoproteins in tissue lysates. TG is a thyroid hormone precursor protein involved in T3 and T4 biosynthesis within thyroid follicular tissue. Electrophoresis was performed on an 8% SDS-PAGE gel under reducing conditions followed by transfer to a nitrocellulose membrane. Signal was detected using an HRP-conjugated secondary antibody and enhanced chemiluminescent substrate. Predicted molecular weight: ~299 kDa.

Description

Zebrafish TG Antibody / Thyroglobulin recognizes Thyroglobulin (TG), a large glycoprotein that serves as the principal precursor molecule for thyroid hormone synthesis. Produced by thyroid follicular epithelial cells and secreted into the follicular lumen, thyroglobulin functions as the molecular scaffold upon which the thyroid hormones thyroxine (T4) and triiodothyronine (T3) are generated. Following iodination and enzymatic processing, thyroglobulin stores thyroid hormone precursors and enables controlled hormone release to support growth, metabolism, development, and physiological homeostasis. Due to its central role in thyroid biology, TG is widely utilized as a marker of thyroid tissue development,

function, and differentiation in vertebrate model systems including zebrafish.

Thyroid hormones regulate numerous biological processes throughout embryonic and adult life. In zebrafish, thyroid signaling influences growth, skeletal development, nervous system maturation, metabolic regulation, pigmentation, reproduction, and organogenesis. Expression of thyroglobulin is closely associated with thyroid follicle formation and maturation, making TG an important molecular marker for studies examining thyroid gland development and endocrine system function. Researchers frequently evaluate TG expression during investigations of developmental biology, endocrine regulation, and environmental factors that influence thyroid hormone pathways.

Zebrafish have emerged as a valuable model organism for studying thyroid physiology because many components of the hypothalamic-pituitary-thyroid axis are evolutionarily conserved between fish and mammals. The transparency of developing embryos and the accessibility of genetic manipulation techniques have enabled detailed analyses of thyroid development and hormone signaling in vivo. Consequently, thyroglobulin expression is commonly examined in studies investigating congenital thyroid disorders, endocrine disruption, developmental abnormalities, and the effects of environmental contaminants on thyroid function.

Beyond its role in hormone production, TG serves as an important biomarker for thyroid tissue identification and differentiation. Changes in thyroglobulin expression may reflect alterations in thyroid follicle integrity, endocrine activity, or thyroid developmental status. Researchers studying thyroid gland formation, regeneration, and disease-associated pathways often monitor TG levels to assess thyroid-specific cellular populations and functional maturation. Because thyroid hormones influence diverse physiological systems, investigations involving thyroglobulin frequently intersect with broader studies of metabolism, growth regulation, and developmental endocrinology.

At NSJ Bioreagents, we provide highly validated antibodies for developmental biology, endocrinology, and zebrafish research. Zebrafish TG Antibody / Thyroglobulin targets a key component of thyroid hormone biosynthesis and thyroid follicle biology. TG expression is widely studied in the context of thyroid development, endocrine signaling, metabolic regulation, and environmental toxicology. Continued investigation of thyroglobulin is providing important insights into the molecular mechanisms that govern thyroid function, vertebrate development, and hormone-dependent physiological processes.

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 TG Antibody / Thyroglobulin Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish Thyroglobulin/TG recombinant protein (amino acids E1839-E2513) was used as the immunogen for the Zebrafish TG Antibody.

Storage

After reconstitution, the Zebrafish TG 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 Thyroglobulin Antibody, Zebrafish TG Protein Antibody, Zebrafish Thyroid Colloid Protein Antibody, Zebrafish Thyroid Hormone Precursor Antibody, Zebrafish Thyroid Glycoprotein Antibody, Zebrafish Thyroid Development Marker Antibody

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