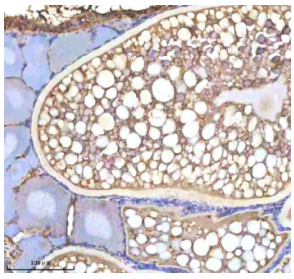
Zebrafish Cyp19a1b Antibody / Aromatase (RZ1215)

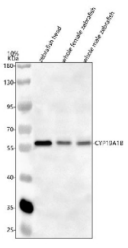
Catalog No.	Formulation	Size
RZ1215	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

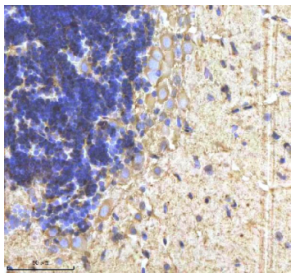
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q5U870
Applications	Western Blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish Cyp19a1b antibody is available for research use only.



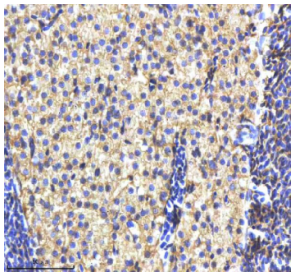
Zebrafish Cyp19a1b / Aromatase Antibody Ovary Tissue IHC. Immunohistochemistry staining of FFPE zebrafish ovary tissue with Cyp19a1b antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



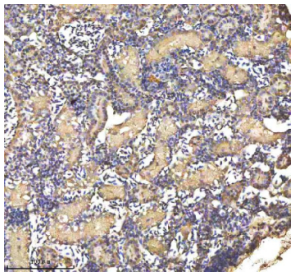
Zebrafish Cyp19a1b / Aromatase Antibody Tissue WB. Western blot analysis of Cyp19a1b protein using Zebrafish Cyp19a1b antibody and 1) zebrafish head, 2) whole female zebrafish and 3) whole male zebrafish tissue lysate. Predicted molecular weight ~58 kDa.



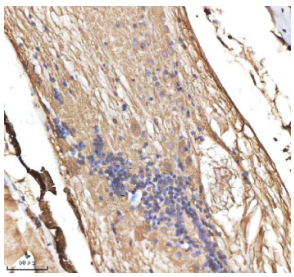
Zebrafish Cyp19a1b / Aromatase Antibody Cerebellum Tissue IHC. Immunohistochemistry staining of FFPE zebrafish cerebellum tissue with Cyp19a1b antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Cyp19a1b / Aromatase Antibody Liver Tissue IHC. Immunohistochemistry staining of FFPE zebrafish liver tissue with Cyp19a1b antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Cyp19a1b / Aromatase Antibody Kidney Tissue IHC. Immunohistochemistry staining of FFPE zebrafish kidney tissue with Cyp19a1b antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Cyp19a1b / Aromatase Antibody Spinal Cord Tissue IHC. Immunohistochemistry staining of FFPE zebrafish spinal cord tissue with Cyp19a1b antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

The Zebrafish Cyp19a1b antibody targets Cyp19a1b, a brain-specific aromatase enzyme essential for estrogen biosynthesis, neural development, and sex hormone regulation in Danio rerio. Zebrafish, also known as Danio rerio, possess two aromatase paralogs: cyp19a1a expressed predominantly in the gonads, and cyp19a1b expressed primarily in radial glial cells of the brain. Cyp19a1b is responsible for converting androgens into estrogens within neural tissues, making it a key regulator of neuroendocrine signaling, neural plasticity, and brain sexual differentiation. This enzyme localizes to the endoplasmic reticulum, consistent with the structure of other cytochrome P450 aromatases.

Cyp19a1b belongs to the cytochrome P450 family and functions as the primary aromatase in the zebrafish central nervous system. Its expression is strongly regulated by estrogen-dependent feedback mechanisms, particularly through estrogen response elements within the cyp19a1b promoter. In zebrafish embryos and larvae, cyp19a1b is highly enriched in proliferative radial glia, where it influences neurogenesis, neural patterning, and synaptic development. A Zebrafish Cyp19a1b antibody is suitable for research applications examining brain aromatase distribution, estrogen-dependent signaling, and neuroendocrine development across embryonic and juvenile stages.

Cyp19a1b plays a major role in local estrogen production within the brain. Estrogens synthesized by radial glia can regulate neuronal proliferation, differentiation, and synaptic plasticity. In developing zebrafish, these actions contribute to

hypothalamic organization, neuroendocrine axis formation, and sex-specific neural circuit maturation. Because neural aromatase expression is responsive to injury and environmental conditions, Cyp19a1b also participates in regenerative neurogenesis, acting as part of the molecular response to brain damage. Its sensitivity to endocrine disruptors and environmental estrogens makes Cyp19a1b a critical biomarker in toxicological and developmental studies.

Structurally, zebrafish Cyp19a1b contains the catalytic heme-binding domain and membrane-anchoring region characteristic of aromatases. These features support its function in the endoplasmic reticulum, where it participates in multi-step oxidative reactions that convert androgens into estrogens. Zebrafish cyp19a1b maps to chromosome 18, with regulatory elements responsible for its strong estrogen-responsive expression in radial glial populations. Co-localization studies frequently detect Cyp19a1b alongside glial markers such as Gfap, as well as within neurogenic territories influenced by estrogen signaling. This precise spatial expression highlights its role in linking hormonal regulation with neural development.

A Zebrafish Cyp19a1b antibody is suitable for detecting Cyp19a1b in studies focused on neural estrogen synthesis, brain development, neuroendocrine regulation, and environmental estrogen responses in Danio rerio. Its distribution in radial glia and neurogenic zones provides a clear readout of local aromatase activity, enabling researchers to assess how estrogen production shapes brain patterning, neuronal lineage progression, and injury-induced regenerative programs. These characteristics make the antibody an essential tool for investigations into vertebrate neuroendocrinology, estrogen biology, and developmental neurogenetics, and this reagent is supplied for research use by NSJ Bioreagents.

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

Application Notes

Optimal dilution of the Zebrafish Cyp19a1b antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Cyp19a1b recombinant protein (amino acids Q230-E511) was used as the immunogen for the Zebrafish Cyp19a1b antibody.

Storage

After reconstitution, the Zebrafish Cyp19a1b antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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