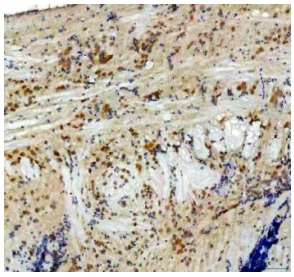
# Zebrafish CYP11C1 Antibody / 11B-Hydroxylase Antibody (RZ1335)

| Catalog No. | Formulation | Size |
|---|---|---|
| RZ1335 | 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** | A0A8M6YV96 |
| **Applications** | Immunohistochemistry (FFPE): 2-5ug/ml |
| **Limitations** | This Zebrafish CYP11C1 Antibody / 11ÃŽÂ²-Hydroxylase Antibody is available for research use only. |



Zebrafish CYP11C1 / 11B-Hydroxylase Antibody Brain IHC. Immunohistochemistry staining of FFPE zebrafish brain tissue using Zebrafish CYP11C1 Antibody demonstrates cytoplasmic HRP-DAB brown staining within scattered neural and perivascular-associated cellular populations. The staining pattern is consistent with expression of Cytochrome P450 Family 11 Subfamily C Member 1 (CYP11C1), also known as 11B-Hydroxylase, a steroidogenic enzyme that catalyzes key steps in cortisol biosynthesis and glucocorticoid production. Signal is observed within brain-associated tissue compartments, reflecting the established relationship between corticosteroid signaling pathways, neuroendocrine regulation, and stress-responsive physiological processes. Heat mediated antigen retrieval was performed in EDTA buffer. Primary antibody was incubated overnight at 4Â°C followed by detection using a peroxidase-conjugated goat anti-rabbit secondary antibody and DAB chromogen.

## Description

Zebrafish CYP11C1 Antibody / 11B-Hydroxylase Antibody recognizes Cytochrome P450 Family 11 Subfamily C Member 1 (CYP11C1), a mitochondrial steroidogenic enzyme that catalyzes critical steps in corticosteroid biosynthesis. CYP11C1 functions as the zebrafish ortholog of vertebrate steroid 11B-hydroxylase enzymes and plays a central role in the production of cortisol, the primary glucocorticoid hormone in teleost fish. By catalyzing terminal hydroxylation reactions

within the steroidogenic pathway, CYP11C1 serves as an essential regulator of endocrine homeostasis, stress responses, metabolism, osmoregulation, and developmental physiology. The conserved nature of steroid hormone biosynthesis has made zebrafish an important vertebrate model for investigating CYP11C1 function in endocrinology and developmental biology.

Cortisol is a major endocrine regulator that influences energy metabolism, immune function, growth, reproduction, and adaptation to environmental stress. Expression of CYP11C1 is concentrated within interrenal tissues, the teleost equivalent of the mammalian adrenal cortex, where corticosteroid synthesis is tightly controlled by neuroendocrine signaling pathways. Consequently, CYP11C1 is widely utilized as a molecular marker for studies of steroidogenesis, stress physiology, endocrine development, and hypothalamic-pituitary-interrenal axis function. Alterations in CYP11C1 expression can directly influence cortisol production and downstream physiological responses.

During embryonic and larval development, glucocorticoid signaling contributes to tissue differentiation, metabolic programming, immune maturation, and adaptation to changing environmental conditions. Researchers frequently examine CYP11C1 expression when investigating endocrine system development, environmental stressors, and genetic pathways that regulate steroid hormone synthesis. The transparency and experimental accessibility of zebrafish embryos provide unique opportunities to study steroidogenic tissues and endocrine signaling networks in vivo throughout vertebrate development.

Because cortisol production is highly responsive to environmental and physiological stimuli, CYP11C1 has become an important target in toxicology, ecotoxicology, and comparative endocrinology research. Zebrafish models are commonly used to evaluate the effects of pharmaceuticals, environmental contaminants, endocrine-disrupting compounds, and stress-inducing conditions on steroidogenic pathways. Monitoring CYP11C1 expression provides valuable insight into endocrine function, stress adaptation, and hormonal regulation under both normal and experimental conditions.

At NSJ Bioreagents, we provide highly validated antibodies for endocrinology, developmental biology, toxicology, and zebrafish research. Zebrafish CYP11C1 Antibody / 11B-Hydroxylase Antibody targets a key enzyme involved in corticosteroid biosynthesis and endocrine regulation. CYP11C1 expression is widely studied in the context of steroidogenesis, cortisol production, stress physiology, endocrine development, and interrenal gland biology. Continued investigation of this important steroidogenic enzyme is expanding our understanding of the molecular mechanisms that govern hormonal regulation, environmental adaptation, and vertebrate endocrine function.

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 CYP11C1 Antibody / 11B-Hydroxylase Antibody should be determined empirically by the investigator.

## Immunogen

An E.coli-derived Zebrafish CYP11C1 recombinant protein (amino acids D23-H701) was used as the immunogen for the Zebrafish CYP11C1 Antibody.

## Storage

After reconstitution, the Zebrafish CYP11C1 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 11B-Hydroxylase Antibody, Zebrafish Steroid 11-Beta Hydroxylase Antibody, Zebrafish Cytochrome P450 Family 11 Subfamily C Member 1 Antibody, Zebrafish Cortisol Synthesis Enzyme Antibody, Zebrafish Steroidogenic Enzyme Antibody, Zebrafish Interrenal Marker Antibody

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