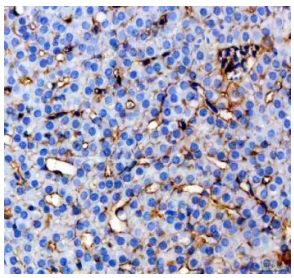
Zebrafish CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody (RZ1367)

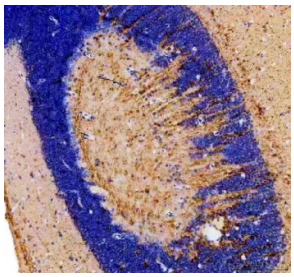
Catalog No.	Formulation	Size
RZ1367	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

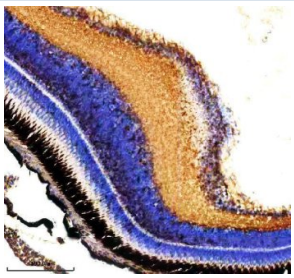
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Lyophilized from a buffered saline solution containing 2% trehalose. Reconstitute with 0.2 mL distilled water to yield a final antibody concentration of 500 ug/mL.
UniProt	Q32LT1
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody is available for research use only.



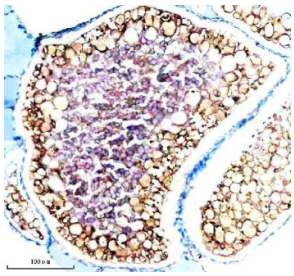
Zebrafish CYP3A65 Antibody Liver IHC. Immunohistochemistry staining of paraffin-embedded zebrafish liver tissue using Zebrafish CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody demonstrates predominantly cytoplasmic HRP-DAB brown staining throughout hepatocyte populations. The staining pattern is consistent with expression of Cytochrome P450 3A65 (CYP3A65), a member of the cytochrome P450 enzyme family involved in xenobiotic metabolism, detoxification, and oxidative biotransformation of endogenous and exogenous compounds. Hepatic localization is consistent with the established role of CYP3A family enzymes in drug metabolism and chemical processing within the liver. The observed staining highlights metabolically active hepatocytes and supports the use of CYP3A65 as a marker for studies of toxicology, pharmacology, metabolic regulation, and environmental response pathways in zebrafish. Heat-mediated antigen retrieval was performed in pH 8.0 EDTA buffer prior to staining.



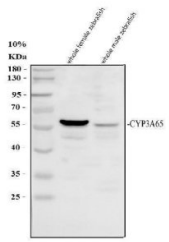
Zebrafish CYP3A65 Antibody Brain IHC. Immunohistochemistry staining of paraffin-embedded zebrafish brain tissue using Zebrafish CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody demonstrates cytoplasmic HRP-DAB brown staining within neuronal and neuropil-rich regions of the brain. The staining pattern is consistent with expression of Cytochrome P450 3A65 (CYP3A65), a member of the cytochrome P450 superfamily involved in oxidative metabolism of endogenous signaling molecules and xenobiotic compounds. Expression within neural tissue is consistent with the growing recognition that cytochrome P450 enzymes contribute to local metabolic regulation, neuroactive compound processing, and maintenance of biochemical homeostasis within the nervous system. The observed staining supports the use of CYP3A65 as a target for studies investigating xenobiotic metabolism, neurotoxicology, and metabolic regulation in zebrafish. Heat-mediated antigen retrieval was performed in EDTA buffer prior to staining.



Zebrafish CYP3A65 Antibody Eye IHC. Immunohistochemistry staining of paraffin-embedded zebrafish eye tissue using Zebrafish CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody demonstrates strong cytoplasmic HRP-DAB brown staining within retinal cell layers, with prominent immunoreactivity extending across multiple neural and photoreceptor-associated regions of the retina. The staining pattern is consistent with expression of Cytochrome P450 3A65 (CYP3A65), a member of the cytochrome P450 enzyme family involved in xenobiotic metabolism, detoxification, and oxidative processing of endogenous signaling molecules. Retinal expression is consistent with a role for CYP3A65 in local metabolic regulation and protection of ocular tissues from endogenous and environmental compounds. The observed staining highlights the metabolically active nature of retinal cells and supports the use of CYP3A65 as a target for studies of ocular biology, toxicology, and cytochrome P450-mediated metabolic pathways in zebrafish. Heat-mediated antigen retrieval was performed in EDTA buffer prior to staining.



Zebrafish CYP3A65 Antibody Ovary IHC. Immunohistochemistry staining of paraffin-embedded zebrafish ovary tissue using Zebrafish CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody demonstrates strong cytoplasmic and membranous HRP-DAB brown staining within ovarian follicular cells surrounding developing oocytes. The staining pattern is consistent with expression of Cytochrome P450 3A65 (CYP3A65), a member of the cytochrome P450 enzyme family involved in xenobiotic metabolism and oxidative processing of endogenous compounds. Ovarian localization is consistent with the role of cytochrome P450 enzymes in steroid metabolism, reproductive physiology, and regulation of hormone-associated signaling pathways. The prominent staining observed in follicle-associated cell populations highlights metabolically active compartments involved in oocyte development and reproductive function. These findings support the use of CYP3A65 as a target for studies of zebrafish reproductive biology, endocrine regulation, toxicology, and cytochrome P450-mediated metabolic pathways. Heat-mediated antigen retrieval was performed in EDTA buffer prior to staining.



Zebrafish CYP3A65 Antibody WB. Western blot analysis of zebrafish whole female and whole male tissue lysates using Zebrafish CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody demonstrates a prominent immunoreactive band at approximately 59 kDa. The observed molecular weight is consistent with the predicted size of Cytochrome P450 3A65 (CYP3A65), a member of the cytochrome P450 superfamily involved in xenobiotic metabolism, detoxification, and oxidative biotransformation of endogenous and exogenous compounds. Detection of a distinct band in both female and male zebrafish samples supports expression of CYP3A65 across adult tissues and is consistent with its established role in metabolic processing and chemical homeostasis. CYP3A65 is frequently studied as a zebrafish model of CYP3A-mediated drug metabolism and toxicological response pathways.

Description

Zebrafish CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody recognizes Cytochrome P450 3A65 (CYP3A65), a member of the cytochrome P450 superfamily of monooxygenase enzymes responsible for oxidative metabolism of endogenous compounds and xenobiotics. CYP3A65 belongs to the zebrafish CYP3 family, which shares functional similarities with mammalian CYP3A enzymes involved in drug metabolism and detoxification. Because cytochrome P450 enzymes play central roles in biotransformation pathways, CYP3A65 is widely studied in toxicology, pharmacology, developmental biology, and environmental health research using zebrafish as a model organism.

CYP3A65 is primarily expressed in tissues involved in absorption, metabolism, and detoxification, where it catalyzes oxidation reactions that increase the solubility and elimination of diverse compounds. Like other cytochrome P450 enzymes, CYP3A65 participates in Phase I metabolic pathways that modify pharmaceuticals, environmental chemicals, dietary compounds, and endogenous signaling molecules. These enzymatic activities help regulate chemical homeostasis and protect tissues from potentially harmful xenobiotic exposure. As a result, CYP3A65 has become an important biomarker for studies investigating metabolic responses to drugs and environmental toxicants.

Zebrafish CYP3A65 is frequently used as a model for understanding conserved mechanisms of xenobiotic metabolism and chemical detoxification. Changes in CYP3A65 expression can occur following exposure to pharmaceuticals, industrial chemicals, environmental contaminants, and other compounds that influence metabolic pathways. Researchers commonly monitor CYP3A65 levels when evaluating toxicological responses, metabolic adaptation, and the biological effects of chemical exposure during development and adulthood. The transparency and genetic tractability of zebrafish further enhance the value of CYP3A65 as a research target in in vivo metabolic studies.

Beyond its role in xenobiotic metabolism, CYP3A65 may contribute to the regulation of endogenous biological pathways through metabolism of steroid hormones, lipids, and signaling molecules. Cytochrome P450 enzymes influence numerous physiological processes by controlling the synthesis, activation, and degradation of biologically active compounds. Consequently, CYP3A65 is increasingly examined in studies investigating developmental regulation, endocrine signaling, and metabolic homeostasis within zebrafish systems.

At NSJ Bioreagents, we provide highly validated antibodies for zebrafish developmental biology, toxicology, pharmacology, and metabolism research. Zebrafish CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody is useful for investigating xenobiotic metabolism, detoxification pathways, drug response mechanisms, and environmental toxicology. Continued research into CYP3A65 is improving our understanding of conserved metabolic pathways and the biological responses to chemical exposure in vertebrate organisms.

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 CYP3A65 Antibody / Cytochrome P450 Enzyme Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish CYP3A65 recombinant protein (amino acids R48-S517) was used as the immunogen for the Zebrafish CYP3A65 Antibody.

Storage

After reconstitution, the Zebrafish CYP3A65 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 Cytochrome P450 3A65 Antibody, Zebrafish CYP3A Antibody, Zebrafish Drug Metabolism Enzyme Antibody, Zebrafish Xenobiotic Metabolism Antibody, Zebrafish Phase I Metabolism Enzyme Antibody, Zebrafish Monooxygenase Antibody