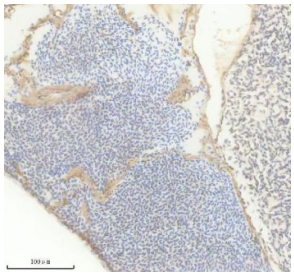
Zebrafish MAO Antibody / Monoamine Oxidase Antibody (RZ1374)

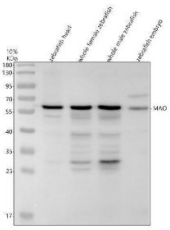
Catalog No.	Formulation	Size
RZ1374	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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	Q6NSN2
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish MAO Antibody / Monoamine Oxidase Antibody is available for research use only.



Zebrafish MAO Antibody Heart IHC. Immunohistochemistry analysis of MAO using Zebrafish MAO Antibody / Monoamine Oxidase Antibody demonstrates membranous and cytoplasmic HRP-DAB brown staining within zebrafish heart tissue. The staining pattern is consistent with expression of Monoamine Oxidase (MAO), a mitochondrial enzyme responsible for the oxidative metabolism of monoamine neurotransmitters including serotonin, dopamine, and norepinephrine. Immunoreactivity is observed within cardiac-associated cellular structures and surrounding tissue compartments, supporting the established role of MAO in biogenic amine metabolism and cellular homeostasis. The observed staining demonstrates the utility of this antibody for studies of neurotransmitter metabolism, mitochondrial enzyme biology, developmental physiology, and monoaminergic signaling pathways in zebrafish models. Heat-mediated antigen retrieval was performed in EDTA buffer prior to staining.



Zebrafish MAO Antibody WB. Western blot analysis of MAO using Zebrafish MAO Antibody / Monoamine Oxidase Antibody demonstrates a prominent immunoreactive band at approximately 59 kDa in zebrafish head, whole female, whole male, and embryo tissue lysates. The observed molecular weight is consistent with the predicted size of Monoamine Oxidase (MAO), a mitochondrial flavin-containing enzyme responsible for the oxidative metabolism of monoamine neurotransmitters including serotonin, dopamine, and norepinephrine. Consistent detection across developmental and adult tissue samples supports broad expression of MAO and confirms specific recognition of the target protein. The observed immunoreactivity demonstrates the utility of this antibody for studies of neurotransmitter metabolism, monoaminergic signaling, neural development, behavioral neuroscience, mitochondrial biology, and neuropharmacology in zebrafish models.

Description

Zebrafish MAO Antibody / Monoamine Oxidase Antibody, also called Z-MAO antibody, recognizes Monoamine Oxidase (MAO), a mitochondrial enzyme that catalyzes the oxidative deamination of monoamine neurotransmitters including serotonin, dopamine, norepinephrine, and related biogenic amines. MAO plays a critical role in regulating neurotransmitter availability and maintaining neural signaling homeostasis by controlling the turnover and degradation of monoaminergic signaling molecules. Through these functions, MAO influences nervous system development, behavior, neuroendocrine regulation, and physiological responses to environmental stimuli.

Monoamine Oxidase is localized primarily to the outer mitochondrial membrane where it functions as a key component of neurotransmitter metabolic pathways. Following neurotransmitter release and reuptake, MAO contributes to signal termination by degrading excess monoamines and preventing abnormal accumulation within neural tissues. Proper regulation of MAO activity is essential for maintaining balanced neurotransmitter signaling and supporting normal neural circuit function throughout development and adulthood.

Zebrafish have emerged as a valuable vertebrate model for studying neurodevelopment, behavioral neuroscience, neurotransmitter biology, and neuropharmacology. Because monoaminergic pathways are highly conserved among vertebrates, zebrafish provide an effective system for investigating the molecular mechanisms that regulate serotonin, dopamine, and catecholamine metabolism. MAO expression is associated with neuronal populations and tissues involved in neurotransmitter signaling and turnover, making it a useful marker for studies of nervous system development and function.

Alterations in monoamine metabolism can significantly influence behavior, cognition, neural plasticity, stress responses, and developmental processes. Consequently, MAO is frequently examined in research involving neurodegeneration, psychiatric disorders, behavioral phenotypes, neurotoxicity, and pharmacological modulation of neurotransmitter pathways. Its central role in neurotransmitter homeostasis has established MAO as an important target in both basic neuroscience and translational research applications.

At NSJ Bioreagents, we provide highly validated antibodies for neurobiology, developmental biology, and zebrafish research applications. Zebrafish MAO Antibody / Monoamine Oxidase Antibody is useful for investigations of neurotransmitter metabolism, monoaminergic signaling, neural development, behavioral neuroscience, mitochondrial enzyme biology, and neuropharmacology. Continued study of MAO is improving our understanding of how neurotransmitter homeostasis regulates vertebrate nervous system function, behavior, and development.

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 MAO Antibody / Monoamine Oxidase Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish MAO recombinant protein (amino acids R43-D335) was used as the immunogen for the Zebrafish MAO Antibody.

Storage

After reconstitution, the Zebrafish MAO 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 MAO Antibody, Z-MAO Antibody, Zebrafish Monoamine Oxidase Antibody, Zebrafish Amine Oxidase Antibody, Zebrafish Biogenic Amine Oxidase Antibody, Zebrafish Neurotransmitter Metabolism Antibody, Zebrafish Neurotransmitter Catabolism Antibody

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