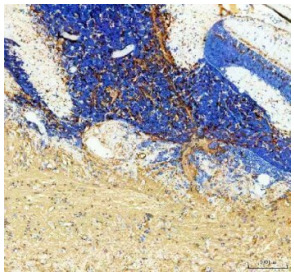
Zebrafish P0 Antibody / MPZ Antibody (RZ1415)

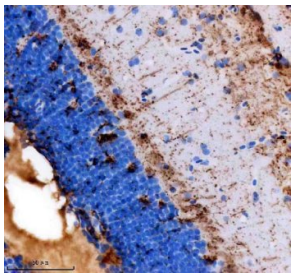
Catalog No.	Formulation	Size
RZ1415	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

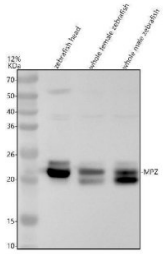
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Lyophilized from a buffered saline solution containing 2% trehalose. Reconstitute with 0.2 mL distilled water to yield a final antibody concentration of 500 ug/mL.
UniProt	A0A0R4IS04
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	This Zebrafish P0 Antibody / MPZ Antibody is available for research use only.



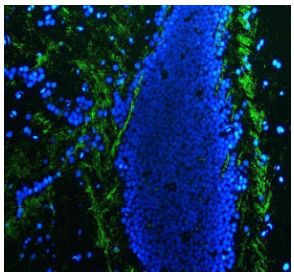
Zebrafish P0 Antibody Brain IHC. Immunohistochemical analysis of paraffin-embedded zebrafish brain tissue using Zebrafish P0 Antibody / MPZ Antibody demonstrates prominent HRP-DAB brown staining within neural tissue structures and fiber-rich regions of the brain. The staining pattern is consistent with expression of P0 (Myelin Protein Zero), a major structural component of myelin that is essential for myelin sheath formation, axonal insulation, and maintenance of normal nerve conduction. Positive immunoreactivity highlights regions associated with myelinated neural pathways and supports the role of MPZ in nervous system development and myelin organization. Heat-induced antigen retrieval was performed in EDTA buffer. Tissue sections were blocked with 10% goat serum and incubated with P0/MPZ antibody (2 ug/ml) overnight at 4Â°C, followed by Peroxidase Conjugated Goat Anti-rabbit IgG and DAB chromogen detection.



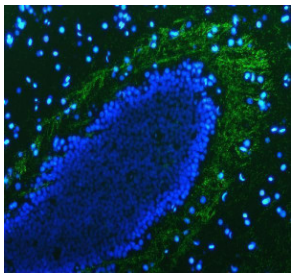
Zebrafish P0 Antibody Brain IHC. Immunohistochemical analysis of paraffin-embedded zebrafish brain tissue using Zebrafish P0 Antibody / MPZ Antibody demonstrates strong HRP-DAB brown staining within fiber-rich neural regions adjacent to densely cellular neuronal layers. The staining pattern is consistent with expression of P0 (Myelin Protein Zero), the principal structural protein of peripheral myelin that mediates myelin membrane adhesion and supports normal nerve conduction. Positive immunoreactivity is associated with myelinated neural processes and regions involved in nervous system organization, highlighting the role of MPZ in myelin sheath formation and maintenance. Heat-induced antigen retrieval was performed in EDTA buffer. Tissue sections were blocked with 10% goat serum and incubated with P0/MPZ antibody (2 ug/ml) overnight at 4Â°C, followed by Peroxidase Conjugated Goat Anti-rabbit IgG and DAB chromogen detection.



Zebrafish P0 Antibody Multi-Tissue WB. Western blot analysis of 1) zebrafish head tissue lysate, 2) whole female zebrafish lysate, and 3) whole male zebrafish lysate using Zebrafish P0 Antibody / MPZ Antibody. A prominent immunoreactive band is detected at approximately 22 kDa in all samples, consistent with the expected molecular weight of P0 (Myelin Protein Zero/MPZ). P0 is the major structural protein of peripheral myelin and plays a critical role in myelin sheath compaction, axonal insulation, and maintenance of normal nerve conduction. The observed expression in zebrafish tissues supports the importance of MPZ in nervous system development and myelin organization. Minor lower-molecular-weight bands observed in some samples may represent processed forms, differential glycosylation states, or protein degradation products commonly detected for myelin-associated proteins. Electrophoresis was performed on a 12% SDS-PAGE gel under reducing conditions. Predicted molecular weight: ~22 kDa. Observed molecular weight: ~22 kDa.



Zebrafish P0 Antibody Adult Brain IF. Immunofluorescence analysis of adult zebrafish brain tissue using Zebrafish P0 Antibody. P0, encoded by the zebrafish mpz gene, was detected in a paraffin-embedded brain section following heat induced antigen retrieval in pH 8.0 EDTA buffer. The tissue was incubated overnight at 4Â°C with primary antibody (5 ug/mL), followed by Fluoro488-conjugated secondary antibody. DAPI (blue) was used as a nuclear counterstain. Green fluorescence highlights P0-positive structures within the adult zebrafish brain, supporting the use of Zebrafish P0 Antibody for investigating myelin protein zero expression, peripheral myelin biology and nervous system development.



Zebrafish P0 Antibody Myelinated Fiber IF. P0, encoded by the zebrafish mpz gene, was detected in a paraffin-embedded section of adult zebrafish brain tissue. Heat induced antigen retrieval was performed in pH 8.0 EDTA buffer prior to overnight incubation with Zebrafish P0 Antibody (5 ug/mL) at 4Â°C, followed by Fluoro488-conjugated secondary antibody. DAPI (blue) was used as a nuclear counterstain. Green fluorescence highlights P0-positive myelinated fiber tracts surrounding the brain parenchyma, consistent with the expected distribution of myelin protein zero. These results support the use of Zebrafish P0 Antibody for investigating mpz, peripheral myelin formation and nervous system development.

Description

Zebrafish P0 Antibody / MPZ Antibody recognizes Myelin Protein Zero (P0), the major structural protein of peripheral nervous system myelin. Encoded by the MPZ gene, P0 is a transmembrane glycoprotein that mediates homophilic adhesion between adjacent layers of the myelin sheath, helping to establish and maintain the compact multilamellar structure that surrounds peripheral axons. This structural role makes P0 essential for proper nerve insulation, rapid impulse conduction, and long-term peripheral nerve function.

Zebrafish P0 Antibody is widely used for studying myelination and peripheral nervous system development. During vertebrate development, Schwann cells produce myelin sheaths that enable efficient saltatory conduction and support axonal health. P0 represents a major component of these myelin membranes and serves as an important marker for Schwann cell maturation and myelin formation. Because zebrafish embryos provide excellent optical accessibility for studying nervous system development in vivo, MPZ expression analysis offers valuable insights into the mechanisms that regulate peripheral nerve formation and maturation.

Zebrafish P0 Antibody is also useful for investigations of axon-glia interactions and myelin maintenance. Proper expression and organization of P0 are required for the formation of stable myelin architecture and normal neuronal function. Alterations in myelin structure can disrupt nerve conduction and impair communication between the nervous system and peripheral tissues. Consequently, P0 serves as an important marker for studies examining the molecular pathways that govern myelin assembly, nerve integrity, and peripheral nervous system homeostasis.

Zebrafish P0 Antibody supports research involving neurodevelopment, Schwann cell biology, peripheral nerve regeneration, and myelin-associated signaling pathways. The strong evolutionary conservation of myelin proteins between zebrafish and mammals has established zebrafish as a valuable model for investigating the cellular and molecular mechanisms underlying myelination. Studies of MPZ expression can therefore contribute to a better understanding of nervous system development, nerve repair processes, and vertebrate neural function.

Zebrafish P0 Antibody is additionally relevant for studies of inherited neuropathies and myelin disorders. Mutations affecting MPZ are associated with several peripheral neuropathies characterized by abnormal myelin formation and impaired nerve conduction. As a result, P0 remains an important biomarker for investigations of myelin biology, peripheral nerve disease mechanisms, and therapeutic strategies aimed at preserving or restoring normal nerve function.

Researchers studying myelination, peripheral nerve biology, and myelin structure may also be interested in our MPZ Antibody / Myelin Structural Protein Antibody.

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 P0 Antibody / MPZ Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish P0/MPZ recombinant protein (amino acids Q18-P206) was used as the immunogen for the Zebrafish P0 Antibody.

Storage

After reconstitution, the Zebrafish P0 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 P0 Antibody, Zebrafish MPZ Antibody, Zebrafish Myelin Protein Zero Antibody, Zebrafish Peripheral Myelin Protein Antibody, Zebrafish Myelin Structural Protein Antibody, Zebrafish Schwann Cell Marker Antibody

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