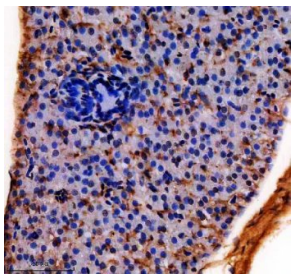
Zebrafish HOXA3 Antibody / Homeobox Protein Hox-A3a Antibody (RZ1466)

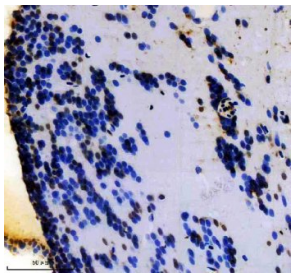
Catalog No.	Formulation	Size
RZ1466	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

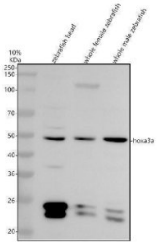
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Lyophilized from a buffered saline solution containing 2% trehalose. Reconstitute with 0.2 mL distilled water to yield a final antibody concentration of 500 ug/mL.
UniProt	Q8AWZ2
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish HOXA3 Antibody / Homeobox Protein Hox-A3a Antibody is available for research use only.



Zebrafish HOXA3 Antibody Liver IHC. Immunohistochemical analysis of HOXA3 expression was performed using anti-HOXA3A antibody in paraffin-embedded zebrafish liver tissue. HOXA3A is a zebrafish ortholog of the mammalian HOXA3 homeobox transcription factor that regulates embryonic patterning, tissue specification, and developmental gene expression. Moderate nuclear and cytoplasmic staining is observed in hepatocytes, consistent with the role of HOXA3A in controlling developmental transcriptional programs and maintaining tissue-specific gene expression. Although HOXA3 is best known for its functions during embryogenesis, continued expression in adult tissues supports roles in cellular differentiation and tissue homeostasis. These results demonstrate the utility of Zebrafish HOXA3 Antibody for studies of developmental biology, transcriptional regulation, vertebrate morphogenesis, and HOX gene function. Heat-mediated antigen retrieval was performed in EDTA buffer, followed by incubation with HOXA3A antibody at 2 ug/ml overnight at 4Â°C. Detection was achieved using a peroxidase-conjugated goat anti-rabbit IgG secondary antibody and DAB chromogen.



Zebrafish HOXA3 Antibody Brain IHC. Immunohistochemical analysis of HOXA3 expression was performed using anti-HOXA3A antibody in paraffin-embedded zebrafish brain tissue. HOXA3A is a zebrafish ortholog of the mammalian HOXA3 homeobox transcription factor that regulates embryonic patterning, tissue specification, and developmental gene expression. Nuclear staining is observed in scattered neural cells, consistent with the function of HOXA3A as a DNA-binding transcription factor that controls developmental transcriptional programs. Expression within the nervous system supports the established role of HOX proteins in vertebrate neural development, regional identity, and maintenance of differentiated cell populations. These results demonstrate the utility of Zebrafish HOXA3 Antibody for studies of developmental biology, neurodevelopment, transcriptional regulation, and HOX gene function. Heat-mediated antigen retrieval was performed in EDTA buffer, followed by incubation with HOXA3A antibody at 2 ug/ml overnight at 4Â°C. Detection was achieved using a peroxidase-conjugated goat anti-rabbit IgG secondary antibody and DAB chromogen.



Zebrafish HOXA3 Antibody WB. Western blot analysis of HOXA3 expression was performed using anti-HOXA3A antibody. Electrophoresis was carried out on a 10% SDS-PAGE gel under reducing conditions. Lane 1: zebrafish head tissue lysate. Lane 2: whole female zebrafish tissue lysate. Lane 3: whole male zebrafish tissue lysate. HOXA3A is a zebrafish ortholog of the mammalian HOXA3 homeobox transcription factor that regulates embryonic patterning, tissue specification, and developmental gene expression. A specific immunoreactive band is detected at approximately 50 kDa in all three samples, slightly above the predicted molecular weight of approximately 44 kDa, while lower molecular weight bands are also observed and may represent processed forms or non-specific reactivity. The consistent detection of the predominant HOXA3A band across head and whole-body lysates supports the widespread developmental role of this transcription factor in regulating vertebrate morphogenesis and cellular differentiation. These results demonstrate the utility of Zebrafish HOXA3 Antibody for studies of developmental biology, transcriptional regulation, embryonic patterning, and HOX gene function.

Description

Zebrafish HOXA3 Antibody / Homeobox Protein Hox-A3a Antibody recognizes HOXA3A, one of the zebrafish orthologs of the mammalian HOXA3 gene and a member of the highly conserved HOX family of homeobox transcription factors. HOXA3 proteins regulate embryonic development by controlling the expression of genes responsible for anterior-posterior body patterning, tissue specification, and organogenesis. Acting as sequence-specific DNA-binding proteins, HOXA3 transcription factors coordinate developmental programs that establish regional identity and guide differentiation of multiple tissues during vertebrate embryogenesis. The high degree of evolutionary conservation between zebrafish and mammals makes zebrafish an excellent model for investigating HOXA3 function and developmental gene regulation.

Zebrafish HOXA3 Antibody / Homeobox Protein Hox-A3a Antibody is valuable for studies of embryonic development, transcriptional regulation, and vertebrate morphogenesis. HOXA3A is expressed within defined embryonic domains where it contributes to formation of the pharyngeal arches, craniofacial structures, vascular tissues, and components of the nervous system. Like other HOX transcription factors, HOXA3A regulates downstream developmental genes that coordinate tissue differentiation and positional identity. Precise temporal and spatial control of HOXA3A expression is essential for normal embryonic patterning and organ development.

In addition to its developmental functions, HOXA3 has been implicated in angiogenesis, wound healing, stem cell biology, and tissue regeneration. Altered HOXA3 expression has also been reported in several human malignancies and developmental disorders, highlighting its importance in regulating cellular proliferation, differentiation, and tissue remodeling. Studies in zebrafish continue to provide important insight into the conserved molecular pathways governed by HOX transcription factors during normal development and disease. Because HOXA3A serves as a key developmental regulator, it remains an important marker for investigations of vertebrate embryogenesis and transcriptional control.

Zebrafish HOXA3 Antibody / Homeobox Protein Hox-A3a Antibody supports investigations of developmental biology, embryonic patterning, transcriptional regulation, vertebrate morphogenesis, and HOX gene function. It is well suited for studies of tissue specification, organogenesis, developmental signaling, and mechanisms controlling cell fate during embryonic development. The conserved biological role of HOXA3A makes Zebrafish HOXA3 Antibody / Homeobox Protein Hox-A3a Antibody an important research tool for developmental and translational biology.

Explore our HOXA3 Antibody / Developmental Patterning Transcription Factor Antibody page to learn more about this key regulator of embryonic development, tissue specification, and developmental gene expression.

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 HOXA3 Antibody / Homeobox Protein Hox-A3a Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish HOXA3/3A recombinant protein (amino acids Y26-Q398) was used as the immunogen for the Zebrafish HOXA3/3A Antibody.

Storage

After reconstitution, the Zebrafish HOXA3/3A 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 HOXA3 antibody, Zebrafish HOXA3A antibody, Zebrafish Homeobox Protein Hox-A3a antibody, Zebrafish HoxA3a antibody, Zebrafish Homeobox Transcription Factor antibody, Zebrafish Developmental Patterning Protein antibody

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