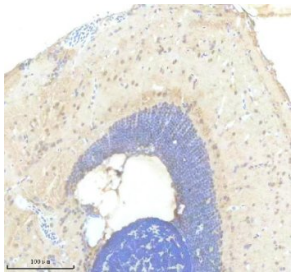
Zebrafish FOXC1 Antibody / Forkhead Box C1A Antibody (RZ1403)

Catalog No.	Formulation	Size
RZ1403	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	Q9DE25
Applications	Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish FOXC1 Antibody / Forkhead Box C1A Antibody is available for research use only.



Zebrafish FOXC1 Antibody Brain IHC. Immunohistochemistry staining of paraffin-embedded zebrafish brain tissue using Zebrafish FOXC1 Antibody / Forkhead Box C1A Antibody demonstrates nuclear and perinuclear HRP-DAB brown staining within discrete neural cell populations. The staining pattern is consistent with expression of FOXC1A, a forkhead box transcription factor that regulates gene expression programs involved in embryonic development, neural crest biology, tissue patterning, and morphogenesis. FOXC1A plays important roles in vertebrate nervous system development and contributes to transcriptional networks that govern cellular differentiation and tissue organization. HIER was performed using EDTA buffer prior to staining. Tissue sections were blocked with 10% goat serum and incubated with primary antibody at 2 ug/ml overnight at 4C before detection with peroxidase-conjugated goat anti-rabbit IgG and DAB chromogen.

Description

Zebrafish FOXC1 Antibody / Forkhead Box C1A Antibody detects FOXC1A, a zebrafish ortholog of human FOXC1 and a member of the forkhead box family of transcription factors. FOXC1 functions as a DNA-binding regulatory protein that controls gene expression programs involved in embryonic development, tissue specification, cellular differentiation, and morphogenesis. As a critical developmental transcription factor, FOXC1 regulates pathways required for proper vertebrate organ formation and tissue patterning. Zebrafish FOXC1 Antibody is valuable for investigations of

developmental gene regulation and embryonic signaling networks.

FOXC1 contains a highly conserved forkhead DNA-binding domain that enables regulation of genes involved in cell fate determination, cellular migration, and tissue organization. Through transcriptional control of downstream targets, FOXC1 contributes to the coordinated development of multiple embryonic structures and helps establish gene expression programs required for normal morphogenesis. These activities place FOXC1 among the key transcriptional regulators governing vertebrate development.

In zebrafish, FOXC1A has been implicated in craniofacial development, neural crest biology, ocular morphogenesis, cardiovascular formation, and mesenchymal tissue differentiation. The protein participates in signaling networks that guide cellular specification and structural organization during embryogenesis. Because zebrafish embryos develop externally and permit direct visualization of developmental processes, FOXC1 serves as a useful marker for studying conserved mechanisms of vertebrate organogenesis and tissue patterning.

Members of the forkhead box family regulate diverse biological processes including development, differentiation, metabolism, and responses to extracellular signaling pathways. FOXC1 contributes to these functions through transcriptional regulation of genes involved in morphogenesis and tissue maintenance. Researchers frequently utilize Zebrafish FOXC1 Antibody to investigate developmental pathways, transcriptional networks, and mechanisms controlling embryonic tissue formation.

Beyond developmental biology, FOXC1 is studied in stem cell regulation, regenerative processes, and gene regulatory networks that influence tissue remodeling and cellular plasticity. The evolutionary conservation of FOXC1-related pathways across vertebrate species makes zebrafish an important model for understanding the molecular mechanisms that coordinate tissue development and cellular specialization. Analysis of FOXC1 expression provides insight into the transcriptional programs that govern vertebrate morphogenesis.

Zebrafish FOXC1 Antibody / Forkhead Box C1A Antibody is useful for researchers studying developmental biology, transcriptional regulation, neural crest development, craniofacial morphogenesis, cardiovascular development, stem cell biology, tissue patterning, and vertebrate organogenesis. Applications may include immunohistochemistry, immunofluorescence, western blotting, and other protein expression analyses when supported by validation data.

Learn more about FOXC1 expression, developmental transcriptional regulation, tissue patterning, and stem cell-associated signaling on our FOXC1 Antibody / Forkhead Transcription Factor Antibody page.

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 FOXC1 Antibody / Forkhead Box C1A Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish Forkhead Box C1A recombinant protein (amino acids P38-F476) was used as the immunogen for the Zebrafish FOXC1 / FOXC1A Antibody.

Storage

After reconstitution, the Zebrafish FOXC1 / FOXC1A 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 FOXC1A Antibody, Zebrafish Forkhead Box C1A Antibody, Zebrafish Forkhead Transcription Factor Antibody, Zebrafish Mesenchymal Development Factor Antibody, Zebrafish Neural Crest Development Antibody, Zebrafish FOX

Copyright © NSJ Bioreagents. All rights reserved.