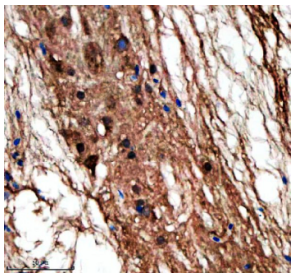
Zebrafish Lin9 Antibody (RZ1003)

Catalog No.	Formulation	Size
RZ1003	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q5RHQ8
Applications	Immunohistochemistry (FFPE) : 2-5 ug/ml
Limitations	This Zebrafish Lin9 antibody is available for research use only.



Zebrafish Lin9 Antibody Spinal Cord IHC. Immunohistochemical analysis of Lin9 protein using Lin9 antibody and paraffin-embedded zebrafish spinal cord tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Zebrafish (Danio rerio) Lin9 antibody recognizes Lin9, a core subunit of the DREAM and MuvB transcriptional regulatory complexes in Danio rerio. Lin9 plays an essential role in controlling the cell cycle, coordinating transcriptional repression during quiescence and gene activation during cell cycle re-entry. The zebrafish lin9 gene is located on chromosome 3 and shows strong conservation with mammalian LIN9, supporting its role in regulating proliferation, differentiation, and early tissue patterning. Lin9 localizes predominantly to the nucleus, where it co-localizes with chromatin-associated regulators, MuvB complex components, and transcription factors that control cell cycle dependent gene expression. High expression levels are commonly observed in embryonic tissues undergoing rapid cell division during early development.

Lin9 functions by interacting with MuvB scaffolding proteins to form complexes that modulate expression of genes required for DNA replication, mitotic progression, chromosome condensation, and cytokinesis. In proliferating cells, Lin9 contributes to activation of late cell cycle gene clusters, enabling proper progression through G2 and M phases. When cells enter quiescence, Lin9 participates in DREAM-mediated transcriptional repression, ensuring cell cycle genes remain silenced until appropriate developmental or environmental cues are received. This dual-mode regulation is crucial for maintaining correct cell proliferation patterns across zebrafish embryogenesis and organogenesis.

Zebrafish developmental studies indicate that Lin9 activity is required for normal morphogenesis, including neural development, somite patterning, hematopoietic specification, and early cardiovascular formation. Disruption of lin9 expression can impair proliferation of progenitor cells, resulting in reduced growth, abnormal tissue architecture, or delayed developmental timing. Given its role in cell cycle regulation, Lin9 is also implicated in pathways that respond to DNA damage, replication stress, and environmental perturbations. Its nuclear distribution reflects engagement with chromatin remodeling factors, epigenetic regulators, and transcriptional machinery controlling lineage specification.

At the molecular level, Lin9 associates with proteins such as Lin37, Lin52, Lin54, and Rb-like factors to form dynamic complexes that shift during the cell cycle. Isoform diversity may arise from alternative promoter usage or transcript variation that influences domain structure, interaction affinity, or cell type specific functions. In zebrafish, lin9 expression is tightly regulated during embryonic cleavage stages and rises in proliferative tissues during organ formation. Lin9 also participates in pathways linked to apoptosis, ensuring damaged or improperly cycling cells are removed during development.

This Zebrafish Lin9 antibody is suitable for detecting Lin9 in research focused on cell cycle regulation, transcriptional control, embryonic development, lineage commitment, and stress response pathways in zebrafish. It supports studies examining DREAM and MuvB complex dynamics, chromatin regulation during proliferation, and developmental consequences of altered cell cycle progression. NSJ Bioreagents provides this reagent as part of its zebrafish and developmental biology antibody portfolio.

This Zebrafish antibody is part of a broader Zebrafish / Danio rerio antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the Zebrafish Lin9 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Lin9 recombinant protein (amino acids F125-T543) was used as the immunogen for the Zebrafish Lin9 antibody.

Storage

After reconstitution, the Zebrafish Lin9 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.