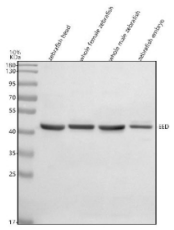
Zebrafish Eed Antibody / Embryonic ectoderm development protein (RZ1103)

Catalog No.	Formulation	Size
RZ1103	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
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q566T0
Applications	Western Blot : 0.5-1 ug/ml
Limitations	This Zebrafish Eed antibody is available for research use only.



Western blot analysis of EED protein using Zebrafish Eed antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~51 kDa.

Description

Zebrafish (Danio rerio) Eed antibody detects Embryonic ectoderm development protein, a core component of the Polycomb repressive complex 2 (PRC2) that regulates chromatin structure and transcriptional silencing. In zebrafish, the eed gene encodes a conserved WD repeat protein that forms an essential scaffold for PRC2 assembly, enabling recruitment of EZH2 and SUZ12 to genomic targets. Through this complex, Eed facilitates trimethylation of histone H3 at lysine 27, a key epigenetic mark required for maintaining transcriptional repression during early development. Because this pathway coordinates lineage commitment and morphogenetic patterning, Embryonic ectoderm development protein antibody reagents are widely used in studies of chromatin regulation, developmental signaling, and stem cell biology.

Eed plays a critical role in establishing and preserving gene expression boundaries that define embryonic axes and tissue identities. PRC2 mediated repression ensures that developmental regulators are silenced in inappropriate contexts, preventing premature differentiation and supporting coordinated morphogenesis. In zebrafish embryos, eed expression is broadly detected in rapidly dividing tissues, including neural progenitors, somitic mesoderm, and early organ primordia. Loss of eed function disrupts histone methylation patterns, alters anterior-posterior patterning, and produces defects in neural tube formation, muscle development, and craniofacial structure.

At the molecular level, Eed stabilizes the PRC2 complex and enhances its catalytic efficiency. Its WD repeat domains recognize and bind preexisting H3K27me3, enabling propagation of repressed chromatin states during DNA replication. This read-write capability is essential for epigenetic inheritance and maintenance of lineage fidelity. In zebrafish, these mechanisms regulate expression of developmental transcription factors, signaling pathway components, and genes involved in proliferation, apoptosis, and morphogen signaling.

Eed functions at the intersection of chromatin remodeling and developmental signaling. PRC2 cross communicates with pathways such as Wnt, BMP, FGF, and Hedgehog by modulating accessibility of downstream effectors and feedback regulators. Disruption of eed alters responsiveness to these pathways, leading to aberrant tissue patterning. The protein also participates in establishing stem and progenitor cell identities through repression of differentiation associated genes, helping maintain pluripotency during early embryonic stages.

Subcellular localization of Eed is primarily nuclear, where it associates with chromatin and regulatory protein complexes. Known interaction partners include EZH2, SUZ12, RBBP4, and additional chromatin associated factors that collectively regulate nucleosome modification and compaction. Studies in zebrafish continue to reveal how Eed contributes to epigenetic memory and how its disruption affects long term developmental trajectories.

A Zebrafish Eed antibody is suitable for research applications such as western blotting, immunohistochemistry, and assays examining chromatin regulation, epigenetic repression, and transcriptional control. This antibody targets Eed for studies in developmental biology, lineage specification, and early embryo patterning. NSJ Bioreagents provides the Zebrafish Eed antibody to support work in chromatin structure, PRC2 function, and vertebrate embryogenesis.

Application Notes

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

Immunogen

An E.coli-derived zebrafish EED recombinant protein (amino acids K79-R443) was used as the immunogen for the Zebrafish Eed antibody.

Storage

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

Copyright © NSJ Bioreagents. All rights reserved.