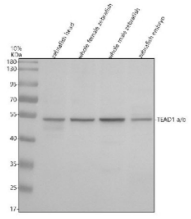
Zebrafish Tead1 Antibody / Tead1a/b / TEA domain family member 1 isoforms a & b (RZ1078)

Catalog No.	Formulation	Size
RZ1078	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	A0A8M3B730, A0A8M3AUN1
Applications	Western Blot : 0.5-1 ug/ml
Limitations	This Zebrafish Tead1 antibody is available for research use only.



Western blot analysis of Tead1a/b protein using Zebrafish Tead1 antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~48 kDa.

Description

Zebrafish (Danio rerio) Tead1 antibody recognizes TEA domain family member 1, detecting isoforms Tead1a and Tead1b encoded by zebrafish tead1 paralogs. Tead1 is a DNA-binding transcription factor that partners with cofactors in the Hippo signaling pathway to regulate cell proliferation, differentiation, organ size, and mechanotransduction during development. In Danio rerio embryos, tead1a and tead1b show broad expression with enrichment in neural tissues, somites, notochord, heart, vasculature, craniofacial mesenchyme, and endoderm-derived organs including liver and pancreas. Subcellular localization is nuclear, consistent with Tead1Ã¢Â€Â™s role in transcriptional regulation.

TEA domain family member 1 functions as a transcriptional effector of the Hippo pathway, integrating environmental cues, mechanical forces, and intracellular signaling states. By forming complexes with cofactors such as Yap and Taz, Tead1 activates gene networks that govern proliferation, apoptosis resistance, cytoskeletal organization, and tissue morphogenesis. Because zebrafish embryos undergo rapid cell rearrangements and dynamic growth, Tead1 activity is essential for coordinating organ size, tissue patterning, and mechanical stability across developing structures. Isoforms a and b contribute overlapping and stage-specific transcriptional regulation, reflecting paralog diversification in teleosts.

Neural development depends on Tead1-mediated transcriptional control. Neural progenitors rely on Tead1 to regulate proliferation, neuroepithelial architecture, and differentiation timing. As neurons mature, Tead1 contributes to pathways that influence axon extension, neuronal polarity, and early synaptic development. Mechanosensitive Hippo-Tead signaling also helps shape brain morphogenesis, guiding the formation of ventricular surfaces and regulating regional expansion.

In somite and skeletal muscle development, Tead1 regulates transcriptional programs involved in myogenic lineage progression, sarcomere assembly, and cytoskeletal remodeling. Muscle progenitors depend on Tead1 for proper coordination of proliferation and differentiation as muscle fibers form and align. Because muscle tissues experience high mechanical strain during early contractions, Tead1 integrates mechanical cues with gene expression to maintain structural integrity.

Cardiac development is strongly influenced by Tead1 activity. The embryonic heart undergoes complex morphogenetic processes including looping, chamber formation, and myocardial maturation, all of which require Tead1-dependent regulation of growth, contractility, and cytoskeletal organization. Tead1 also modulates endocardial and epicardial signaling programs that shape ventricular structure and coronary vasculature. Disruption of Tead1 function can lead to abnormal heart morphology or reduced cardiac performance.

Vascular development relies on Tead1 to regulate endothelial proliferation, lumen formation, and vessel stabilization. Hippo-Tead signaling influences endothelial responsiveness to shear stress and mechanical strain, ensuring proper vessel branching and maturation. In zebrafish, where vascular development is rapid and highly dynamic, Tead1 provides essential transcriptional control over angiogenesis.

Endoderm-derived organs also depend on Tead1 for proper growth and differentiation. In liver and pancreas, Tead1 regulates metabolic gene expression, epithelial organization, and stress-response pathways that guide organogenesis. Because these tissues must balance proliferation with functional maturation, Tead1-mediated transcriptional programs coordinate developmental timing and cellular identity.

This Zebrafish Tead1 antibody is suitable for detecting TEA domain family member 1 isoforms a and b in research focused on Hippo signaling, transcriptional regulation, neural development, myogenesis, cardiovascular morphogenesis, and endodermal organogenesis in zebrafish. NSJ Bioreagents provides this reagent within its zebrafish and transcription-factor antibody catalog.

Application Notes

Optimal dilution of the Zebrafish Tead1 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Tead1a/b recombinant protein (amino acids D38-D422) was used as the immunogen for the Zebrafish Tead1 antibody. This antibody will detect the a and b isoforms.

Storage

After reconstitution, the Zebrafish Tead1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.