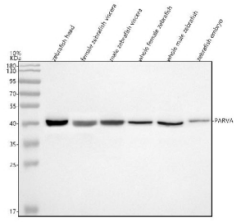
Zebrafish Parvin alpha Antibody / Parva / Actopaxin (RZ1085)

Catalog No.	Formulation	Size
RZ1085	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	Q6DRM4
Applications	Western Blot : 0.5-1 ug/ml
Limitations	This Zebrafish Parvin alpha antibody is available for research use only.



Zebrafish Parvin alpha Antibody WB. Western blot analysis of Alpha Parvin/Actopaxin/PARVA protein using Zebrafish Parvin alpha antibody and 1) zebrafish head, 2) female zebrafish viscera, 3) male zebrafish viscera, 4) whole female zebrafish, 5) whole male zebrafish and 6) zebrafish embryo tissue lysate. Predicted molecular weight ~42 kDa.

Description

Zebrafish (Danio rerio) Parvin alpha antibody recognizes Parvin alpha, a cytoskeletal adaptor protein that participates in integrin mediated adhesion, actin remodeling, and cell shape regulation. In zebrafish, Parvin alpha is encoded by the parva gene and is structurally conserved with its mammalian counterparts, containing calponin homology motifs that enable binding to actin and focal adhesion components. The protein is widely expressed during embryogenesis, particularly in tissues undergoing active migration, adhesion, and morphogenetic movements. Because Parvin alpha is closely associated with integrin linked signaling complexes, reagents such as Parva antibody and Actopaxin antibody are often used to visualize adhesion dynamics in developmental studies.

Parvin alpha belongs to the parvin family of adaptor proteins, which includes alpha, beta, and gamma isoforms across vertebrates. These proteins interact with ILK, PINCH, and other focal adhesion constituents to form the ILK PINCH Parvin complex, a central integrator of extracellular matrix cues and intracellular cytoskeletal responses. In zebrafish, parva is essential for processes such as somite formation, muscle organization, and cardiovascular development, reflecting its broad requirement for stable cell adhesion and coordinated actin polymerization. The protein localizes primarily to the cytoplasm and cell membrane, especially at sites of integrin clustering and tension bearing structures.

Functionally, Parvin alpha contributes to signaling pathways regulating cell migration, spreading, and polarity. It binds to F actin through conserved domains and serves as a scaffold for kinases and adaptor proteins that modulate actin dynamics. During zebrafish development, Parvin alpha expression is prominent in muscle precursors, vascular tissues, and epithelial layers that undergo coordinated morphogenesis. Its interaction with integrin linked kinase positions it within pathways that influence survival, contractility, and tissue integrity. Studies in other vertebrate systems suggest that Parvin alpha also participates in signaling networks that regulate cell proliferation and stress responses, supporting its classification as a multifunctional adaptor.

Parvin alpha is enriched in tissues requiring strong mechanical coupling, such as skeletal muscle, cardiac muscle, and endothelial structures. In zebrafish, early expression corresponds with somitogenesis and muscle fiber alignment, consistent with its roles in anchoring cytoskeletal elements and reinforcing adhesion contacts. Subcellular co localization partners include ILK, PINCH, actin filaments, and focal adhesion proteins involved in mechanotransduction. These interactions enable Parvin alpha to regulate cytoskeletal architecture and respond to changes in mechanical load during development.

From a developmental systems perspective, parva is involved in multiple pathways tied to actin cytoskeleton regulation, including Rho family GTPase signaling and contractile machinery assembly. Its influence on integrin mediated adhesion makes it a valuable marker for studying epithelial and mesenchymal transitions, cardiovascular development, and wound healing responses in zebrafish models. Because Parvin alpha integrates both structural and signaling functions, changes in its expression can alter cell morphology, adhesion strength, and migration patterns.

The Zebrafish Parvin alpha antibody is suitable for research applications such as immunohistochemistry, western blotting, and related assays that examine adhesion complexes and actin organization. This reagent detects endogenous Parvin alpha without implying epitope mapping or literature validation. NSJ Bioreagents provides the Zebrafish Parvin alpha antibody to support studies in cytoskeletal dynamics, integrin signaling, tissue morphogenesis, and vertebrate developmental biology.

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

Application Notes

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

Immunogen

An E.coli-derived zebrafish Alpha Parvin/Actopaxin/PARVA recombinant protein (amino acids E150-D248) was used as the immunogen for the Zebrafish Parvin alpha antibody.

Storage

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