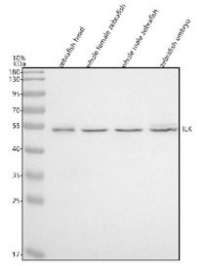
Zebrafish Integrin-linked kinase Antibody / ILK (RZ1044)

Catalog No.	Formulation	Size
RZ1044	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	Q6PHD6
Localization	Cytoplasm
Applications	Western Blot : 0.5-1 ug/ml
Limitations	This Zebrafish Integrin-linked kinase antibody is available for research use only.



Zebrafish Integrin-linked kinase Antibody WB. Western blot analysis of Integrin-linked kinase protein using Integrin-linked kinase antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Expected molecular weight: 51-59 kDa.

Description

Zebrafish (Danio rerio) Integrin-linked kinase antibody recognizes Integrin-linked kinase, a conserved intracellular adaptor and signaling regulator encoded by the zebrafish ilk gene. Although originally named for structural similarity to kinases, ILK functions primarily as a scaffold that connects integrin receptors to actin cytoskeleton remodeling and intracellular signaling networks. In Danio rerio, ILK is expressed from the earliest stages of embryogenesis and is enriched in the developing brain, neural tube, somites, cardiac primordia, craniofacial mesenchyme, vasculature, and actively remodeling

epithelial tissues. Subcellular localization occurs at focal adhesions, cell-matrix junctions, and cytoskeletal interfaces, reflecting its roles in mechanotransduction and adhesion-dependent signaling.

Integrin-linked kinase is a core component of the ILK-PINCH-parvin complex, a tripartite adhesion-regulating assembly that controls cytoskeletal organization, cell polarity, and survival pathways. In zebrafish embryos, ILK is essential for transmitting extracellular matrix (ECM) cues into intracellular structural and transcriptional responses. By anchoring integrins to actin networks, ILK regulates cell migration, epithelial integrity, somite boundary formation, and early morphogenetic movements. It also modulates key developmental signaling pathways, including Akt, GSK3-beta, Wnt, and TGF-beta cascades, helping coordinate cell behavior during tissue patterning.

Developmental studies show that loss of ilk function in zebrafish produces severe defects including cardiac tube malformation, reduced angiogenic sprouting, collapsed somite boundaries, and impaired neural crest migration. ILK is required for proper cardiac contractility by supporting adhesion structures and maintaining cytoskeletal alignment within myocardial cells. In muscle precursors, ILK contributes to myofibril organization, sarcomere stability, and force transmission during early myogenesis. Because integrin signaling influences survival and proliferation, ILK also affects the growth of neural progenitors and endoderm-derived organs.

Integrin-linked kinase helps regulate mechanosensitive gene expression. As physical forces shape zebrafish tissues during embryogenesis, ILK-dependent adhesion complexes adjust cytoskeletal tension, coordinate ECM remodeling, and influence nuclear signaling pathways linked to cell fate decisions. ILK integrates mechanical information with transcriptional regulators to refine processes such as craniofacial cartilage patterning, heart looping, and vascular morphogenesis.

ILK also contributes to cellular stress resilience. Through its association with parvin and PINCH proteins, ILK stabilizes cytoskeletal and adhesion structures during oxidative or metabolic stress. Zebrafish embryos experiencing environmental challenges rely on ILK to maintain adhesion integrity and prevent apoptosis associated with cytoskeletal collapse. ILKÃ¢Â€Â™s involvement in Akt-mediated survival signaling adds further protection during rapid growth phases.

At the molecular level, ILK contains ankyrin repeats and a pseudo-kinase domain that enable scaffold assembly, recruitment of downstream effectors, and stabilization of integrin-associated complexes. Isoform-specific regulation or post translational modification of ILK may fine-tune adhesion dynamics in tissues with distinct mechanical or signaling requirements. ILK interacts with numerous cytoskeletal regulators, small GTPases, and kinases, positioning it at the center of adhesion-governed developmental pathways.

This Zebrafish Integrin-linked kinase antibody is suitable for detecting ILK in research focused on integrin signaling, cytoskeletal organization, cardiac development, angiogenesis, neural crest migration, epithelial remodeling, and mechanotransduction in zebrafish. It supports studies examining adhesion complex assembly, intracellular signaling integration, and developmental phenotypes resulting from altered ILK activity. NSJ Bioreagents provides this reagent within its zebrafish and adhesion-signaling antibody collection.

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

Application Notes

Optimal dilution of the Zebrafish Integrin-linked kinase antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Integrin-linked kinase recombinant protein (amino acids M1-H203) was used as the immunogen for the Zebrafish Integrin-linked kinase antibody.

Storage

After reconstitution, the Zebrafish Integrin-linked kinase antibody can be stored for up to one month at 4oC. For long-

term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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