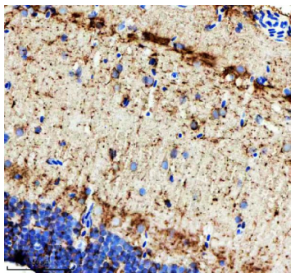
Zebrafish ILK Antibody / Integrin-linked kinase (RZ1004)

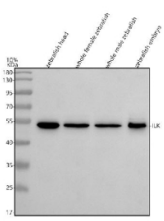
Catalog No.	Formulation	Size
RZ1004	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

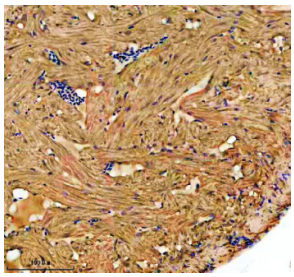
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q6PHD6
Localization	Cytoplasm
Applications	Western Blot : 0.5-1 ug/ml Immunohistochemistry (FFPE) : 2-5 ug/ml
Limitations	This Zebrafish ILK antibody is available for research use only.



IHC staining of FFPE zebrafish brain tissue with Zebrafish ILK antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot analysis of ILK protein using ILK 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.



IHC staining of FFPE zebrafish heart tissue with Zebrafish ILK antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

IHC staining of FFPE zebrafish muscle tissue with Zebrafish ILK antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Zebrafish (Danio rerio) ILK antibody recognizes Integrin-linked kinase, a conserved intracellular adaptor protein encoded by the zebrafish ilk gene located on chromosome 8. ILK is a central regulator of integrin mediated signaling and functions at the interface between the cell membrane and the actin cytoskeleton. Although initially categorized as a serine-threonine kinase, ILK is now widely understood to function primarily as a scaffold and structural signaling hub. In zebrafish, ILK is broadly expressed during early embryogenesis, with strong enrichment in tissues undergoing rapid morphological change, including developing muscle, notochord, vasculature, and pronephric structures. ILK localizes to focal adhesions, cell-matrix junctions, and actin-associated complexes where it co-localizes with integrins, PINCH, parvin, and other components of the ILK-PINCH-parvin complex.

Integrin-linked kinase plays a crucial role in transferring mechanical and biochemical signals from the extracellular matrix to intracellular pathways that control survival, proliferation, and cytoskeletal organization. In zebrafish, ILK contributes to adhesion mediated signaling required for proper somite formation, muscle attachment, and body axis stability. ILK regulates actin filament organization by linking integrins to Rho family GTPases, contributing to cell shape changes and coordinated tissue morphogenesis. It also supports the assembly of focal adhesion complexes that anchor muscle fibers to the myotendinous junction, and disruption of ilk in zebrafish leads to muscle detachment, impaired locomotion, and defective myofibril organization.

ILK influences several key developmental pathways, including PI3K-Akt signaling, cell polarity regulation, and mechanotransduction. In vascular development, ILK is required for endothelial cell adhesion, vessel stabilization, and lumen formation. Zebrafish models have shown that loss of ILK function results in vascular instability, impaired angiogenesis, and defective axis elongation. ILK also participates in cardiac development by guiding myocardial adhesion and contractile apparatus organization. In epithelial tissues, ILK helps coordinate cell-matrix interactions that govern migration, collective movement, and tissue integrity during organogenesis.

At the molecular level, ILK forms stable complexes with PINCH and parvin proteins, creating a core structural module that integrates signaling from integrins and growth factor receptors. These complexes link to actin regulators, contributing to dynamic cytoskeletal remodeling. Isoforms of ILK may arise through alternative regulatory elements that influence spatial or temporal expression. During early zebrafish development, ILK levels rise in parallel with the formation of axial structures, muscle fiber maturation, and early organ formation. Because mechanosensitive signaling is fundamental during zebrafish morphogenesis, ILK is a major determinant of how cells interpret mechanical cues during rapid tissue growth.

This Zebrafish ILK antibody is suitable for detecting Integrin-linked kinase in research focused on cell adhesion,

cytoskeletal organization, mechanotransduction, embryonic development, muscle formation, and vascular biology in zebrafish. It supports studies examining ILK-mediated signaling pathways, integrin dependent tissue organization, and developmental phenotypes that arise from altered adhesion dynamics. NSJ Bioreagents provides this antibody within its zebrafish and developmental biology research collection.

Application Notes

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

Immunogen

An E.coli-derived zebrafish ILK recombinant protein (amino acids M1-K452) was used as the immunogen for the Zebrafish ILK antibody.

Storage

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