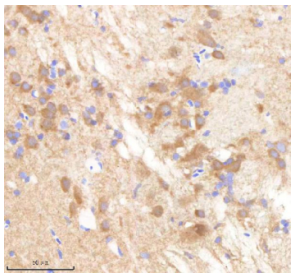
Zebrafish Pafah1b1 Antibody / Pafah1b1a / Pafah1b1b / Lissencephaly-1 (RZ1262)

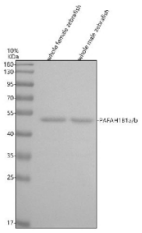
Catalog No.	Formulation	Size
RZ1262	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

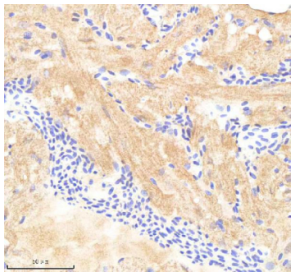
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q7T394, Q803D2
Localization	Cytoplasm
Applications	Western Blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish Pafah1b1 antibody is available for research use only.



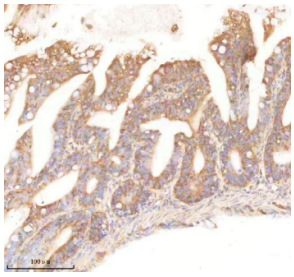
Zebrafish Pafah1b1 Antibody Brain Tissue IHC. Immunohistochemistry staining of FFPE zebrafish brain tissue with Pafah1b1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



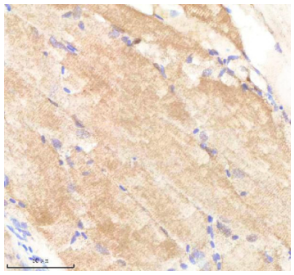
Zebrafish Pafah1b1 Antibody Tissue WB. Western blot analysis of Pafah1b1 protein using Zebrafish Pafah1b1 antibody and 1) whole female zebrafish tissue lysates and 2) whole male zebrafish tissue lysates. Predicted molecular weight ~47 kDa.



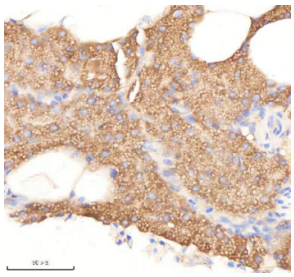
Zebrafish Pafah1b1 Antibody Heart Tissue IHC. Immunohistochemistry staining of FFPE zebrafish heart tissue with Pafah1b1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Pafah1b1 Antibody Colon Tissue IHC. Immunohistochemistry staining of FFPE zebrafish colon tissue with Pafah1b1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Pafah1b1 Antibody Muscle Tissue IHC. Immunohistochemistry staining of FFPE zebrafish muscle tissue with Pafah1b1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Pafah1b1 Antibody Pancreas Tissue IHC. Immunohistochemistry staining of FFPE zebrafish pancreas tissue with Pafah1b1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

The Zebrafish Pafah1b1 antibody targets Pafah1b1, including the duplicated paralogs Pafah1b1a and Pafah1b1b, also known as Lissencephaly-1, a microtubule-associated protein essential for neuronal migration, brain patterning, cytoskeletal organization, and embryonic development in Danio rerio. Zebrafish, also known as Danio rerio, express pafah1b1 paralogs in the developing nervous system, particularly within neural progenitors and migrating neurons where microtubule dynamics must be tightly regulated. Pafah1b1 localizes mainly to the cytoplasm and along microtubule networks, where it helps coordinate nucleokinesis, mitotic spindle orientation, and intracellular trafficking during neurodevelopment.

Pafah1b1 is the zebrafish ortholog of mammalian LIS1, a gene whose disruption causes classical lissencephaly due to severe neuronal migration defects. As in mammals, zebrafish Pafah1b1 interacts with dynein and dynactin complexes to regulate force generation along microtubules. A Zebrafish Pafah1b1 antibody is suitable for detecting cytoplasmic and microtubule-associated expression in neural tissues undergoing migration, differentiation, and axonal extension during early development.

Functionally, Pafah1b1 is indispensable for proper neural architecture. It regulates microtubule stability, centrosome positioning, and dynein-driven transport, all of which are required for neurons to divide, migrate, and mature correctly. In zebrafish embryos, pafah1b1a and pafah1b1b expression is enriched in the forebrain, midbrain, hindbrain, retina, and spinal cord, where rapid neuronal proliferation and migration occur. Loss-of-function or knockdown of pafah1b1 paralogs leads to cortical layering defects, impaired axon outgrowth, mitotic spindle abnormalities, and global disruptions in brain morphogenesis. Because these phenotypes mirror human LIS1-driven pathology, zebrafish serve as a valuable model for studying microtubule-dependent neurodevelopmental disorders.

Structurally, zebrafish Pafah1b1 proteins contain WD-repeat domains that facilitate protein-protein interactions required for dynein regulation, cargo transport, and cytoskeletal assembly. These WD domains form a beta-propeller structure essential for binding microtubule-associated partners and coordinating intracellular movement. Zebrafish pafah1b1a maps to chromosome 5, while pafah1b1b resides on chromosome 6, and each paralog exhibits overlapping yet distinct expression patterns regulated by neural developmental cues. Co-localization studies often detect Pafah1b1 within neural progenitors, mitotic cells, and migrating neurons, overlapping with markers such as tubulin, dynein components, and neurogenic transcription factors.

A Zebrafish Pafah1b1 antibody is suitable for detecting Pafah1b1 in studies focused on neuronal migration, dynein-microtubule regulation, brain morphogenesis, mitotic spindle positioning, and neurodevelopmental disease modeling in Danio rerio. Its distribution along microtubule networks and in neural progenitor domains allows researchers to examine cytoskeletal defects, evaluate mutants affecting brain patterning, analyze mechanisms of axon extension, and investigate how intracellular transport shapes neural architecture. Because Pafah1b1 is strongly conserved and central to neuronal migration, this antibody is a powerful tool for developmental neurobiology and cytoskeletal research. The reagent is supplied for research use by NSJ Bioreagents.

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

Application Notes

Optimal dilution of the Zebrafish Pafah1b1 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Pafah1b1 recombinant protein (amino acids I95-R410) was used as the immunogen for the Zebrafish Pafah1b1 antibody. This antibody will detect the a and b isoforms.

Storage

After reconstitution, the Zebrafish Pafah1b1 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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