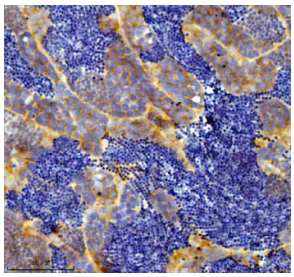
Zebrafish Eif3a Antibody / Eukaryotic translation initiation factor 3 subunit A (RZ1126)

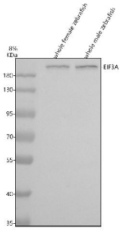
Catalog No.	Formulation	Size
RZ1126	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

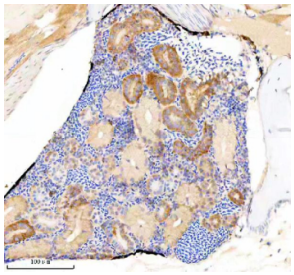
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q6PCR7
Localization	Cytoplasm
Applications	Western blot: 0.5-1 ug/ml Immunohistochemistry (FFPE): 2-5 ug/ml
Limitations	This Zebrafish Eif3a antibody is available for research use only.



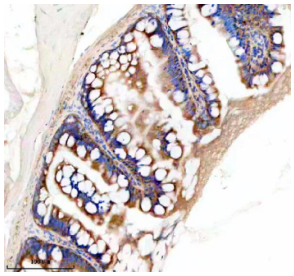
Zebrafish Eif3a Antibody Testis IHC. Immunohistochemistry staining of FFPE zebrafish testis tissue with Zebrafish Eif3a antibody, HRP secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



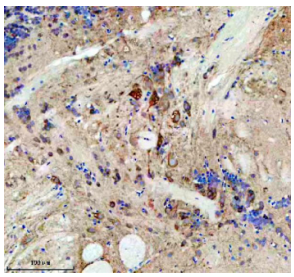
Zebrafish Eif3a Antibody WB. Western blot analysis of Eif3a protein using Zebrafish Eif3a antibody and 1) whole female zebrafish and 2) whole male zebrafish tissue lysate. Predicted molecular weight ~167 kDa.



Zebrafish Eif3a Antibody Kidney IHC. Immunohistochemistry staining of FFPE zebrafish kidney tissue with Zebrafish Eif3a antibody, HRP secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Eif3a Antibody Colon IHC. Immunohistochemistry staining of FFPE zebrafish colon tissue with Zebrafish Eif3a antibody, HRP secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Eif3a Antibody Brain IHC. Immunohistochemistry staining of FFPE zebrafish brain tissue with Zebrafish Eif3a antibody, HRP secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Zebrafish (Danio rerio) Eif3a antibody detects Eif3a, the largest subunit of the eukaryotic translation initiation factor 3 (eIF3) complex, which plays essential roles in ribosome recruitment, start-codon selection, and regulation of protein synthesis. In zebrafish, the eif3a gene encodes a conserved scaffolding protein known as Eukaryotic translation initiation factor 3 subunit A, responsible for organizing the multisubunit eIF3 complex and coordinating interactions between mRNA, initiation factors, and the 40S ribosomal subunit. Because translational control is fundamental to cell growth, differentiation, and stress adaptation, Zebrafish Eif3a antibody reagents support research examining early embryogenesis, metabolic regulation, and gene expression control.

Eif3a is a core structural element of the eIF3 complex, contributing to assembly and stability of the initiation machinery. It interacts with a wide array of initiation factors, including eIF1, eIF1A, eIF2, and eIF5, while also participating in the recruitment of the 43S preinitiation complex to mRNA. In zebrafish embryos, eif3a expression is highest in rapidly dividing and differentiating tissues such as the neural plate, somites, heart primordium, and endodermal organs. The abundance of Eukaryotic translation initiation factor 3 subunit A reflects the high translational demand required during early organ formation and lineage specification.

Beyond its structural roles, Eif3a contributes to selective translation of specific mRNA subsets. In vertebrates, eIF3 has

been shown to preferentially regulate transcripts involved in cell cycle progression, proliferation, and stress responses. Evidence suggests that Eif3a can influence ribosome loading efficiency and may participate in translation reinitiation events that fine-tune gene expression programs. In zebrafish, these mechanisms are likely important during developmental transitions where rapid protein synthesis supports morphogenetic movements, metabolic shifts, and differentiation of specialized tissues.

Eif3a also plays roles in cellular stress adaptation, including responses to nutrient availability and unfolded protein stress. By modulating translation initiation, the eIF3 complex helps cells adjust protein synthesis output during stress or changes in metabolic state. These regulatory mechanisms are particularly relevant in zebrafish embryos, where fluctuating demands during rapid growth require precise tuning of translational capacity. Disruption of eif3a function in vertebrate models has been associated with impaired proliferation, developmental arrest, and abnormal tissue patterning due to dysfunctional protein synthesis.

At the molecular level, Eif3a contains multiple structural modules that support binding to partner subunits and ribosomal components. Its interactions help maintain the integrity of the eIF3 complex, ensuring appropriate engagement with mRNA and the translation machinery. Subcellular localization is predominantly cytoplasmic, particularly at ribosome-rich regions and areas of high biosynthetic activity. In zebrafish, Eif3a distribution reflects dynamic translation zones during embryogenesis, where protein production is tightly linked to developmental timing and tissue specification.

A Zebrafish Eif3a antibody is suitable for research applications such as western blotting, immunohistochemistry, and assays examining translational control, ribosome recruitment, and developmental gene expression. This antibody targets Eif3a for studies focused on protein synthesis regulation, growth control, and vertebrate embryonic development. NSJ Bioreagents provides the Zebrafish Eif3a antibody to support investigations in translational biology and developmental physiology.

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

Application Notes

Optimal dilution of the Zebrafish Eif3a antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Eif3a recombinant protein (amino acids K13-H478) was used as the immunogen for the Zebrafish Eif3a antibody.

Storage

After reconstitution, the Zebrafish Eif3a 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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