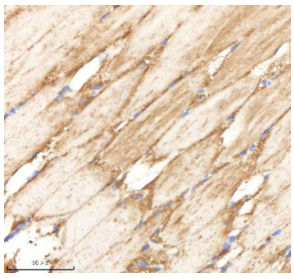
Zebrafish Ppp1r12a Antibody / Mypt1 (RZ1244)

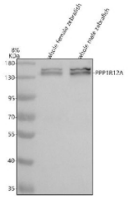
Catalog No.	Formulation	Size
RZ1244	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

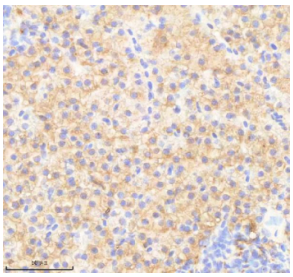
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q6DRG7
Localization	Cytoplasm
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish Ppp1r12a antibody is available for research use only.



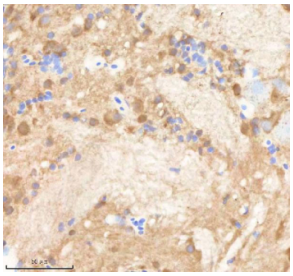
IHC staining of FFPE zebrafish muscle tissue with Ppp1r12a antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot analysis of Ppp1r12a protein using Zebrafish Ppp1r12a antibody and 1) whole female zebrafish and 2) whole male zebrafish tissue lysate. Predicted molecular weight ~117 kDa.



IHC staining of FFPE zebrafish liver tissue with Ppp1r12a antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE zebrafish brain tissue with Ppp1r12a antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Ppp1r12a, or protein phosphatase one regulatory subunit twelve a, is a regulatory protein that controls the activity of protein phosphatase one, a major serine threonine phosphatase involved in numerous cellular processes. In zebrafish, Ppp1r12a plays a critical role in regulating cytoskeletal organization, cell contractility, and morphogenesis during development.

Zebrafish Ppp1r12a is the ortholog of the human PPP1R12A gene, which encodes the protein also known as myosin phosphatase target subunit one. This protein directs protein phosphatase one to myosin light chains and other cytoskeletal targets, enabling dynamic control of actomyosin contraction and cell movement. It is involved in signaling pathways that govern smooth muscle relaxation, cell shape changes, and cell migration.

During zebrafish development, Ppp1r12a is expressed in tissues undergoing active morphogenetic movements and structural rearrangement, such as the developing somites, neural tube, and heart. It contributes to proper tissue organization by regulating the phosphorylation state of cytoskeletal components and by modulating mechanical tension within cells.

Disruption of Ppp1r12a function in zebrafish has been shown to affect cell adhesion, motility, and organ formation, highlighting its importance in developmental processes. Due to its conservation across vertebrates and its central role in regulating phosphatase activity, zebrafish Ppp1r12a is a useful model for studying signal transduction, cytoskeletal regulation, and developmental disorders involving cell morphology and contractility.

Application Notes

Optimal dilution of the Zebrafish Ppp1r12a antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Ppp1r12a recombinant protein (amino acids M1-D40) was used as the immunogen for the Zebrafish Ppp1r12a antibody.

Storage

After reconstitution, the Zebrafish Ppp1r12a antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.