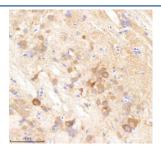


# Zebrafish Pabpc4 Antibody / Polyadenylate-binding protein (RZ1261)

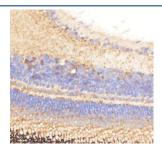
Catalog No.	Formulation	Size
RZ1261	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

## **Bulk quote request**

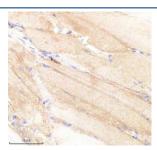
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	A0A8M9PE33
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish Pabpc4 antibody is available for research use only.



IHC staining of zebrafish Pabpc4 protein using Zebrafish Pabpc4 antibody, HRP-labeled secondary and DAB substrate. Pabpc4 was detected in a paraffin-embedded section of zebrafish brain tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



IHC staining of zebrafish Pabpc4 protein using Zebrafish Pabpc4 antibody, HRP-labeled secondary and DAB substrate. Pabpc4 was detected in a paraffin-embedded section of zebrafish eye tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



IHC staining of zebrafish Pabpc4 protein using Zebrafish Pabpc4 antibody, HRP-labeled secondary and DAB substrate. Pabpc4 was detected in a paraffin-embedded section of zebrafish muscle tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

### **Description**

Pabpc4 (Poly(A)-binding protein cytoplasmic 4) is a regulatory protein involved in RNA metabolism, particularly in the stabilization, translation, and decay of mRNA. It plays a central role in controlling the mRNA translation process and is essential for maintaining proper gene expression during cellular stress, development, and differentiation.

In zebrafish, Pabpc4 is an ortholog of the human PABPC4 gene. Both zebrafish and human Pabpc4 share significant sequence similarity and conserved functional domains, particularly in the RNA-binding regions. This high level of conservation between zebrafish and human Pabpc4 makes the zebrafish protein an excellent model for studying RNA regulation and its impact on cellular processes like development, cell differentiation, and stress response.

The primary function of Pabpc4 in zebrafish is to bind to the poly(A) tail of mRNA, which is a key feature in regulating mRNA stability and translation initiation. Pabpc4 facilitates the recruitment of translation initiation factors to the mRNA and plays a role in translational control, particularly in response to environmental stressors or changes in nutrient availability. Pabpc4 also participates in mRNA decay pathways, ensuring that mRNAs are properly degraded when they are no longer needed, thus maintaining cellular homeostasis.

Zebrafish Pabpc4 is expressed in multiple tissues, including the brain, muscle, and embryonic tissues, and is particularly important during early development. It regulates mRNA translation and is crucial for protein synthesis during the rapid cell divisions and differentiation events that occur during embryogenesis.

Given its role in RNA metabolism and the regulation of gene expression, zebrafish Pabpc4 is a valuable model for studying molecular biology, genetic regulation, and developmental processes. The conservation of its function across species also makes it relevant for research into human diseases related to RNA processing and gene regulation.

#### **Application Notes**

Optimal dilution of the Zebrafish Pabpc4 antibody should be determined by the researcher.

#### **Immunogen**

A synthetic peptide corresponding to a sequence in the middle region of zebrafish Pabpc4 protein was used as the immunogen for the Pabpc4 antibody.

#### **Storage**

After reconstitution, the Zebrafish Pabpc4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.