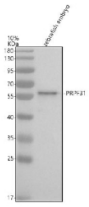
Zebrafish Prpf31 Antibody / Prp31 / Pre-mRNA processing factor 31 (RZ1282)

Catalog No.	Formulation	Size
RZ1282	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	Q7SXM7
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Prpf31 antibody is available for research use only.



Western blot analysis of Prpf31 protein using Zebrafish Prpf31 antibody and zebrafish embryo tissue lysates. Predicted molecular weight ~56 kDa.

Description

Prpf31 (Pre-mRNA processing factor 31) is a core component of the spliceosome, the complex responsible for removing introns from pre-messenger RNA transcripts. It is essential for the proper assembly and stability of the U4/U6-U5 tri-snRNP complex, a critical step in the formation of the mature spliceosome. By enabling efficient and accurate splicing of pre-mRNA, Prpf31 supports normal gene expression and cellular function.

In zebrafish, Prpf31 is the ortholog of the human PRPF31 gene. The zebrafish and human proteins are highly conserved, especially in functional domains that mediate interactions with other spliceosomal proteins. This conservation suggests

that Prpf31 in zebrafish plays equivalent roles in pre-mRNA splicing and is suitable for modeling human splicing-related conditions.

Zebrafish Prpf31 may have multiple isoforms due to alternative splicing. These isoforms can contribute to functional diversity and may exhibit distinct spatial or temporal expression patterns during development. Isoform-specific roles are under ongoing investigation and may offer insights into tissue-specific splicing regulation.

Expression of Prpf31 in zebrafish is detected in tissues with high levels of transcriptional activity, such as the developing eye, brain, and somites. During early embryogenesis, its presence is crucial for the proper expression of genes required for organ development and cell differentiation.

Mutations in the human PRPF31 gene are associated with autosomal dominant retinitis pigmentosa, a degenerative eye disease. Zebrafish models have been used to study the pathogenesis of this condition and to explore therapeutic strategies, due to the geneÃ¢Â€Â™s conserved function and retinal expression.

Application Notes

Optimal dilution of the Zebrafish Prpf31 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Prpf31 recombinant protein (amino acids N84-K499) was used as the immunogen for the Zebrafish Prpf31 antibody.

Storage

After reconstitution, the Zebrafish Prpf31 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.