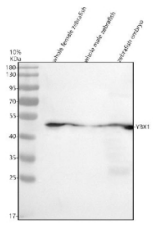
Zebrafish Yb-1 Antibody / Ybx1 / Y-box-binding protein 1 (RZ1174)

Catalog No.	Formulation	Size
RZ1174	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	B5DE31
Applications	Western Blot : 0.5-1 ug/ml
Limitations	This Zebrafish Yb-1 antibody is available for research use only.



Western blot analysis of Yb-1 protein using Zebrafish Yb-1 antibody and 1) whole female zebrafish, 2) whole male zebrafish and 3) zebrafish embryo tissue lysate. Predicted molecular weight ~35 kDa.

Description

Y-box binding protein 1 (Ybx1, Yb-1) is a multifunctional RNA- and DNA-binding protein conserved across vertebrates. In zebrafish, Yb-1 plays a critical role in early embryogenesis, cellular proliferation, and gene regulation. The protein contains a conserved cold shock domain (CSD) that facilitates binding to nucleic acids, enabling Yb-1 to modulate transcription, mRNA splicing, stability, and translation.

Biological Function:

Yb-1 is essential for zebrafish embryonic development. Knockdown or mutation of Yb-1 results in early embryonic lethality due to impaired morphogenesis, suggesting a key regulatory role in zygotic gene activation and maternal RNA

clearance. It is also involved in stress responses, regulation of cell cycle genes, and may contribute to sex determination pathways in zebrafish.

Expression Pattern:
Yb-1 is maternally deposited and ubiquitously expressed during early embryonic stages. As development progresses, its expression becomes more tissue-specific, particularly enriched in proliferative zones and neural tissues.

Orthology and Conservation:
Zebrafish Ybx1 is orthologous to human YBX1, sharing high sequence similarity and functional conservation. This makes zebrafish a valuable model for studying YBX1-related roles in development and disease, including cancer biology and RNA regulation.

Application Notes

Optimal dilution of the Zebrafish Yb-1 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Yb-1 recombinant protein (amino acids R275-D310) was used as the immunogen for the Zebrafish Yb-1 antibody.

Storage

After reconstitution, the Zebrafish Yb-1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.