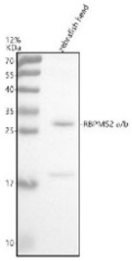
Zebrafish Rbpms2 Antibody / RNA binding protein, mRNA processing factor 2 / Isoforms a & b (RZ1082)

Catalog No.	Formulation	Size
RZ1082	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	Q6DH13, Q7ZUL7
Applications	Western Blot : 0.5-1 ug/ml
Limitations	This Zebrafish Rbpms2 antibody is available for research use only.



Western blot analysis of Rbpms2a/b protein using Zebrafish Rbpms2 antibody and zebrafish head tissue lysate. The predicted molecular weight of Rbpms2a/b is ~22 kDa.

Description

Zebrafish (Danio rerio) Rbpms2 antibody targets the UniProt Recommended Name RNA binding protein, mRNA processing factor 2, an essential cytoplasmic and nuclear RNA regulatory protein belonging to the RRM domain RNA binding protein family. In zebrafish, RNA binding protein, mRNA processing factor 2 (commonly called Rbpms2 and historically referred to as heart and soul) is encoded by the rbpms2a and rbpms2b paralogs, which give rise to isoforms a and b with overlapping but distinct developmental roles. The protein is found in both the cytoplasm and nucleus, where it regulates mRNA processing, stability, and ribonucleoprotein granule formation. High expression in embryonic cardiac tissues and neuronal precursors underscores its importance in early morphogenesis.

Rbpms2 functions as a post-transcriptional regulator central to cardiogenesis, left-right axis establishment, and cytoskeletal organization. As a member of the RRM superfamily, it binds U-rich and GU-rich RNA motifs and influences trafficking and translation of key developmental transcripts. Loss of rbpms2 function leads to cardiac chamber defects, impaired looping, and contractile abnormalities, reinforcing the protein's membership in the broader RNA binding protein family and highlighting its developmental significance. Expression is enriched in the heart tube, mesodermal precursors, neuronal progenitors, and dynamic regions of morphogenesis, supporting its role in stage-specific gene expression regulation.

Rbpms2 localization is dynamic, appearing in cytoplasmic granules that may function as RNA transport hubs and in the nucleus where it participates in splicing regulation. Known co-localization partners include cytoplasmic granule components and elements of the splicing machinery. In cardiac tissues, the protein may intersect with pathways involved in MAPK signaling, actin remodeling, and sarcomere maturation. Developmental studies show prominent expression during somitogenesis, cardiac tube formation, and early neuronal patterning, which aligns with its participation in cell identity maintenance and organogenesis.

Rbpms2 isoforms a and b arise from duplicated loci within the zebrafish genome. Isoform a is often expressed earlier in embryogenesis, while isoform b becomes prominent during cardiac differentiation. Each isoform contains conserved RRM architecture, with subtle differences in expression timing that reflect their complementary biological roles. The protein also participates in pathways tied to metabolic support of cardiac tissue by stabilizing transcripts involved in mitochondrial and cytoskeletal function. Its developmental expression patterns make it a valuable marker for studies of congenital heart biology and early tissue patterning.

The Zebrafish Rbpms2 antibody is suitable for detecting total Rbpms2 expression across isoforms a and b in research applications such as western blotting, immunohistochemistry, and other assay formats used to examine RNA regulatory mechanisms. Because isoforms are highly conserved, most antibodies recognize both unless specifically engineered for isoform selectivity. This reagent detects endogenous Rbpms2 expression without implying any epitope characterization or external validation of its clone. NSJ Bioreagents provides the Zebrafish Rbpms2 antibody for developmental biology research, especially studies focused on transcript regulation, cardiac morphogenesis, and mRNA processing pathways.

Application Notes

Optimal dilution of the Zebrafish Rbpms2 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Rbpms2a/b recombinant protein (amino acids K105-Q190) was used as the immunogen for the Zebrafish Rbpms2 antibody. This antibody will detect the a and b isoforms.

Storage

After reconstitution, the Zebrafish Rbpms2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.