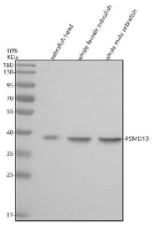
# Zebrafish Psmd13 Antibody / 26S proteasome non-ATPase regulatory subunit 13 (RZ1291)

| Catalog No. | Formulation | Size |
|---|---|---|
| RZ1291 | 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 |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit Ig |
| **Purity** | Antigen affinity chromatography |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | Q7ZU69 |
| **Applications** | Western Blot: 0.5-1ug/ml |
| **Limitations** | This Zebrafish Psmd13 antibody is available for research use only. |



Zebrafish Psmd13 Antibody Tissue WB. Western blot analysis of Psmd13 protein using Zebrafish Psmd13 antibody and 1) zebrafish head, 2) whole female zebrafish and 3) whole male zebrafish tissue lysate. Predicted molecular weight ~43 kDa.

## Description

The Zebrafish Psmd13 antibody targets Psmd13, also known as 26S proteasome non-ATPase regulatory subunit 13, a lid component of the 19S regulatory particle essential for substrate recognition, deubiquitination coordination, and regulated protein turnover in Danio rerio. Zebrafish, also known as Danio rerio, express psmd13 broadly during embryogenesis, with enriched expression in metabolically active and proliferative tissues such as the developing brain, somites, notochord, heart, and endodermal organs. Psmd13 localizes to the cytoplasm and nucleus as part of the 19S lid structure, where it contributes to docking, conformational stability, and coordination of ubiquitin-dependent substrate

processing prior to degradation within the 20S core.

Psmd13 belongs to the non-ATPase cohort of 19S subunits and contains structural interaction motifs that stabilize the proteasome lid and help position deubiquitinating enzymes, including Psmd14, for efficient removal of ubiquitin chains. In zebrafish embryos, high psmd13 expression reflects the need for continuous, selective degradation of signaling molecules, transcription factors, and misfolded proteins as tissues proliferate and differentiate. A Zebrafish Psmd13 antibody is suitable for detecting cytoplasmic and nuclear pools of this regulatory subunit, marking domains where ubiquitin-mediated signaling turnover and proteasomal quality control are highly active.

Functionally, Psmd13 is indispensable for proteasome regulatory dynamics. It supports proper assembly of the 19S lid, enabling the proteasome to recognize ubiquitinated substrates, coordinate ubiquitin chain trimming, and facilitate substrate engagement by the ATPase ring. In zebrafish, Psmd13-dependent proteolysis modulates key developmental pathways including Wnt, Notch, Hedgehog, Fgf, and NF-kB signaling. These pathways govern germ layer patterning, neural differentiation, muscle formation, cardiac morphogenesis, and metabolic regulation. Disruption of psmd13 leads to impaired proteasome assembly, accumulation of ubiquitinated proteins, heightened proteotoxic stress, and developmental failure due to dysregulated turnover of essential signaling regulators.

Structurally, zebrafish Psmd13 contributes to the architecture of the 19S lid by forming interfaces that stabilize the multi-subunit regulatory module. These interactions support the recruitment and spatial organization of deubiquitinating components and substrate receptors. The zebrafish psmd13 gene maps to chromosome 7 and is regulated by metabolic cues, developmental transcription factors, and stress-responsive pathways that modulate proteasome biogenesis. Co-localization studies detect Psmd13 in perinuclear proteasome clusters, ubiquitin-rich cytoplasmic regions, and nuclei of transcriptionally active cells, often overlapping with components of the ATPase base and catalytic 20S core.

A Zebrafish Psmd13 antibody is suitable for detecting Psmd13 in studies focused on proteasome assembly, ubiquitin-dependent degradation, developmental proteostasis, stress-response signaling, and transcriptional regulation in Danio rerio. Its distribution across nuclear and cytoplasmic compartments provides insight into tissue-specific proteolytic demand and regulatory turnover. Researchers use Psmd13 expression to evaluate proteasome dysfunction in mutants, examine proteotoxic stress states, and investigate how regulated protein degradation shapes embryonic growth and tissue specification. This antibody is supplied for research use by NSJ Bioreagents.

This Zebrafish antibody is part of a broader Zebrafish / Danio rerio antibody panel offered by NSJ Bioreagents.

## Application Notes

Optimal dilution of the Zebrafish Psmd13 antibody should be determined by the researcher.

## Immunogen

E. coli-derived zebrafish Psmd13 recombinant protein (amino acids E70-L355) was used as the immunogen for the Zebrafish Psmd13 antibody.

## Storage

After reconstitution, the Zebrafish Psmd13 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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