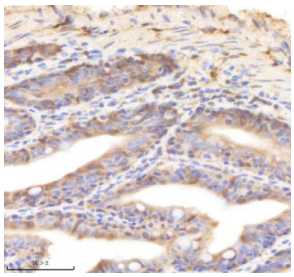
Zebrafish Psmd8 Antibody / 26S proteasome non-ATPase regulatory subunit 8 (RZ1296)

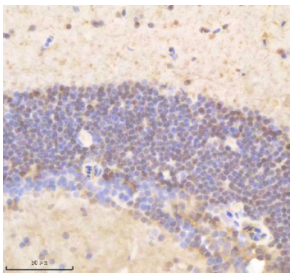
Catalog No.	Formulation	Size
RZ1296	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

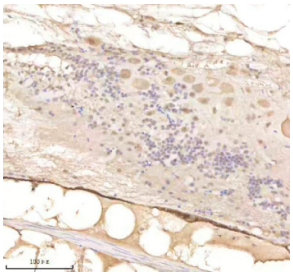
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q6IQH4
Localization	Cytoplasmic, nuclear
Applications	Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish Psmd8 antibody is available for research use only.



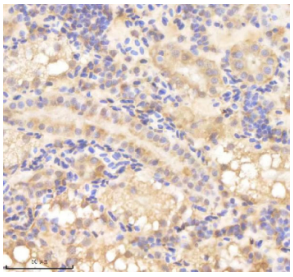
Zebrafish Psmd8 Antibody Colon Tissue IHC. Immunohistochemistry staining of zebrafish Psmd8 protein using Zebrafish Psmd8 antibody, HRP-labeled secondary and DAB substrate. Psmd8 was detected in a paraffin-embedded section of zebrafish colon tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Psmd8 Antibody Brain Tissue IHC. Immunohistochemistry staining of zebrafish Psmd8 protein using Zebrafish Psmd8 antibody, HRP-labeled secondary and DAB substrate. Psmd8 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.



Zebrafish Psmd8 Antibody Spinal Tissue IHC. Immunohistochemistry staining of zebrafish Psmd8 protein using Zebrafish Psmd8 antibody, HRP-labeled secondary and DAB substrate. Psmd8 was detected in a paraffin-embedded section of zebrafish spinal tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Psmd8 Antibody Kidney Tissue IHC. Immunohistochemistry staining of zebrafish Psmd8 protein using Zebrafish Psmd8 antibody, HRP-labeled secondary and DAB substrate. Psmd8 was detected in a paraffin-embedded section of zebrafish kidney tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

The Zebrafish Psmd8 antibody targets Psmd8, also known as 26S proteasome non-ATPase regulatory subunit 8, an essential structural and regulatory component of the 19S proteasome lid that stabilizes substrate-processing architecture and coordinates polyubiquitin-dependent degradation in Danio rerio. Zebrafish, also known as Danio rerio, express psmd8 throughout embryogenesis, with enriched expression in metabolically active and proliferative tissues such as the developing brain, somites, notochord, heart, and endodermal organs. Psmd8 localizes to cytoplasmic and nuclear proteasome-rich regions as part of the 19S lid, where it contributes to the assembly, positioning, and regulatory dynamics required for efficient proteolysis.

Psmd8 belongs to the non-ATPase group of lid subunits and plays a scaffolding role that helps maintain the structural integrity of the lid while ensuring proper orientation of deubiquitinating enzymes and ubiquitin receptors. Its interactions support the conformational transitions needed for substrate deubiquitination, handoff to the AAA-ATPase ring, and regulated entry into the 20S catalytic chamber. In zebrafish embryos, psmd8 expression corresponds with phases of rapid protein turnover required for tissue patterning, metabolic adaptation, and developmental signal modulation. A Zebrafish Psmd8 antibody is suitable for detecting nuclear and cytoplasmic localization consistent with regions under high proteasomal demand.

Functionally, Psmd8 is essential for regulated protein degradation. By contributing to lid stability and substrate-processing alignment, Psmd8 ensures efficient removal of polyubiquitinated proteins, including short-lived transcription factors, signaling intermediates, and damaged or misfolded proteins. In zebrafish, Psmd8-dependent proteolysis modulates major developmental pathways such as Wnt, Fgf, Hedgehog, Notch, and NF-kB, all of which rely on precise turnover rates to coordinate germ layer formation, neural development, muscle differentiation, cardiac morphogenesis, and immune-metabolic responses. Disruption of psmd8 leads to proteasome destabilization, accumulation of ubiquitinated proteins, proteotoxic stress, and defects in developmental patterning due to impaired regulatory turnover.

Structurally, zebrafish Psmd8 contains conserved interaction domains that anchor it within the 19S lid and facilitate cross-

talk with adjacent regulatory subunits. These motifs help regulate proteasome conformational cycling and the spatial arrangement of deubiquitinating machinery. The zebrafish psmd8 gene maps to chromosome 14 and is regulated by metabolic cues, stress-responsive transcriptional networks, and developmental signals influencing proteasome biogenesis. Co-localization studies detect Psmd8 in perinuclear proteasome clusters, ubiquitin-rich cytoplasmic zones, and nuclei of transcriptionally active cells, frequently overlapping with other lid components and the 20S catalytic core.

A Zebrafish Psmd8 antibody is suitable for detecting Psmd8 in studies focused on proteasome assembly, ubiquitin-dependent degradation, developmental proteostasis, intracellular signaling regulation, and stress-response mechanisms in Danio rerio. Its nuclear and cytoplasmic distribution provides a detailed view of proteolytic activity across developing tissues, enabling researchers to evaluate degradation defects, assess proteotoxic stress responses, and explore how turnover of regulatory factors shapes organogenesis and developmental timing. 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 Psmd8 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Psmd8 recombinant protein (amino acids M1-V267) was used as the immunogen for the Zebrafish Psmd8 antibody.

Storage

After reconstitution, the Zebrafish Psmd8 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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