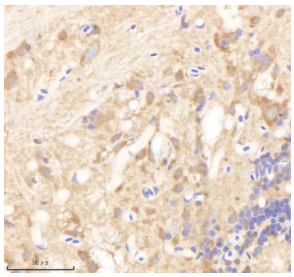
Zebrafish Psmd6 Antibody / 26S proteasome non-ATPase regulatory subunit 6 (RZ1294)

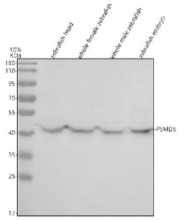
Catalog No.	Formulation	Size
RZ1294	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

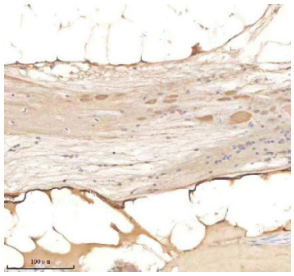
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q7ZWE5
Localization	Nuclear, cytoplasmic, extracellular
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish Psmd6 antibody is available for research use only.



IHC staining of FFPE zebrafish brain tissue with Psmd6 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot analysis of Psmd6 protein using Zebrafish Psmd6 antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~46 kDa.



IHC staining of FFPE zebrafish spinal tissue with Psmd6 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Psmd6 (Proteasome 26S subunit, non-ATPase 6) is a vital component of the 19S regulatory particle of the 26S proteasome, which is responsible for the ATP-dependent degradation of ubiquitinated proteins. As part of the regulatory particle, Psmd6 helps facilitate the recognition, unfolding, and translocation of substrates into the 20S catalytic core of the proteasome for subsequent degradation. This protein plays an essential role in controlling protein turnover, maintaining cellular homeostasis, and regulating a wide range of biological processes, including the cell cycle, DNA repair, and stress response.

In zebrafish, Psmd6 is the ortholog of the human PSMD6 gene, sharing high sequence identity and functional conservation. Both zebrafish and human Psmd6 proteins feature conserved domains that are crucial for their role in proteasome function, allowing for the proper assembly and regulation of the 26S proteasome complex. The similarity between zebrafish Psmd6 and human PSMD6 makes zebrafish an excellent model for studying proteasomal mechanisms and related diseases.

Psmd6 in zebrafish may also have isoforms arising from alternative splicing. These isoforms may exhibit variations in their expression patterns or regulatory functions, which could influence proteasomal activity in different tissues or stages of development. The presence of such isoforms allows for specific regulation of proteasomal function under different cellular conditions, such as during cellular stress, development, or differentiation.

In zebrafish, Psmd6 is expressed in a variety of tissues, particularly in those with high protein turnover, such as the brain, liver, and kidney. This reflects the proteinÃ¢Â€Â™s essential role in regulating protein degradation and maintaining cellular integrity, particularly in actively dividing cells or tissues under stress.

Due to its functional conservation with human PSMD6, Psmd6 in zebrafish provides an ideal model for investigating proteasomal dysfunctions related to various human diseases, including neurodegenerative disorders, cancer, and immune-related conditions. Disruptions in PSMD6 function can lead to the accumulation of damaged or misfolded proteins, contributing to disease pathogenesis. The zebrafish model facilitates the study of these diseases and offers opportunities for therapeutic screening targeting proteasomal pathways.

Application Notes

Optimal dilution of the Zebrafish Psmd6 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Psmd6 recombinant protein.(amino acids T27-Q378) was used as the immunogen for the Zebrafish Psmd6 antibody.

Storage

After reconstitution, the Zebrafish Psmd6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and

store at -20oC. Avoid repeated freezing and thawing.