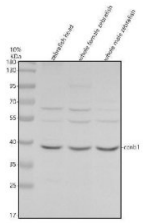
Zebrafish Cyclin B1 Antibody / CCNB1 Antibody (RZ1407)

Catalog No.	Formulation	Size
RZ1407	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Lyophilized from a buffered saline solution containing 2% trehalose. Reconstitute with 0.2 mL distilled water to yield a final antibody concentration of 500 ug/mL.
UniProt	Q9IB44
Applications	0.5-1ug/ml
Limitations	This Zebrafish Cyclin B1 Antibody / CCNB1 Antibody is available for research use only.



Zebrafish Cyclin B1 Antibody WB. Western blot analysis of zebrafish head (lane 1), whole female (lane 2), and whole male (lane 3) tissue lysates using Zebrafish Cyclin B1 Antibody / CCNB1 Antibody demonstrates a prominent immunoreactive band at approximately 40 kDa, consistent with expression of Cyclin B1. Cyclin B1 is a key regulator of cell cycle progression that forms an active complex with CDK1 to drive the transition from G2 phase into mitosis. As an essential component of the maturation-promoting factor (MPF) complex, Cyclin B1 controls chromosome condensation, spindle formation, and mitotic entry during cellular proliferation. The observed banding pattern across multiple zebrafish tissues supports endogenous expression of Cyclin B1 and is consistent with its role in regulating cell division and tissue growth. Primary antibody was used at 0.5 ug/ml.

Description

Zebrafish Cyclin B1 Antibody / CCNB1 Antibody detects Cyclin B1, a key regulatory protein that controls progression through the cell cycle and governs entry into mitosis. Cyclin B1 is encoded by the CCNB1 gene and functions by forming an active complex with cyclin-dependent kinase 1 (CDK1), creating the maturation-promoting factor (MPF) required for transition from G2 phase into M phase. Through regulation of chromosome condensation, spindle assembly, nuclear envelope breakdown, and cell division, Cyclin B1 serves as a critical driver of cellular proliferation and embryonic growth. Zebrafish Cyclin B1 Antibody is widely used for studies of cell cycle regulation, mitosis, and vertebrate development.

Cyclin B1 expression is tightly controlled throughout the cell cycle. Protein levels increase during S phase and G2 phase, reaching maximal abundance immediately before mitosis. Following successful chromosome segregation and completion of cell division, Cyclin B1 undergoes rapid degradation through ubiquitin-mediated proteolysis, permitting exit from mitosis and re-entry into interphase. This dynamic pattern of accumulation and destruction makes Cyclin B1 one of the most widely recognized markers of proliferating and mitotically active cells.

In zebrafish, Cyclin B1 plays an essential role during embryogenesis, when rapid rounds of cell division drive tissue expansion and organ formation. Expression of Cyclin B1 is associated with actively proliferating cell populations and developmental regions undergoing growth and differentiation. Because zebrafish embryos undergo highly coordinated and easily visualized cell divisions, they provide a powerful vertebrate model for studying Cyclin B1-dependent mechanisms that regulate cellular proliferation and developmental timing.

Cell cycle progression is fundamental to embryonic development, tissue maintenance, regeneration, and stem cell biology. Cyclin B1 functions at a critical checkpoint where cells commit to mitotic division, making it an important marker for investigating proliferative activity and regulation of cell cycle transitions. Researchers frequently utilize Zebrafish Cyclin B1 Antibody to examine developmental growth, tissue regeneration, cellular proliferation, and mechanisms that govern mitotic entry.

Beyond developmental biology, Cyclin B1 is extensively studied in stem cell research, regenerative medicine, cancer biology, and cell cycle-associated signaling pathways. The evolutionary conservation of Cyclin B1 and CDK1 signaling across vertebrates makes zebrafish an important model for understanding the molecular mechanisms that regulate cell division and tissue growth. Analysis of Cyclin B1 expression provides valuable insight into proliferative status and cell cycle dynamics in developing and adult tissues.

Zebrafish Cyclin B1 Antibody / CCNB1 Antibody is useful for researchers studying cell cycle regulation, mitosis, cellular proliferation, developmental biology, stem cell biology, tissue regeneration, embryogenesis, and vertebrate organogenesis. Applications may include immunohistochemistry, immunofluorescence, western blotting, and other protein expression analyses when supported by validation data.

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

Application Notes

The optimal working dilution of the Zebrafish Cyclin B1 Antibody / CCNB1 Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish Cyclin B1/CCNB1 recombinant protein (amino acids M1-S398) was used as the immunogen for the Zebrafish Cyclin B1 Antibody.

Storage

After reconstitution, the Zebrafish Cyclin B1 Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Zebrafish Cyclin B1 Antibody, Zebrafish CCNB1 Antibody, Zebrafish Mitotic Cyclin Antibody, Zebrafish G2/M Cell Cycle Regulator Antibody, Zebrafish Cell Cycle Control Protein Antibody, Zebrafish Mitosis Regulatory Protein Antibody

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