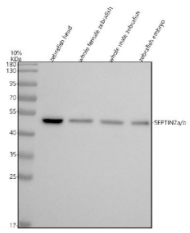
Zebrafish Septin7 Antibody / Septin7a / Septin7b (RZ1306)

Catalog No.	Formulation	Size
RZ1306	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	A0A096X788, A0A8M1NZC4
Applications	Western Blot: 0.5-1ug/ml
Limitations	This Zebrafish Septin7 antibody is available for research use only.



Zebrafish Septin7 Antibody Tissue WB. Western blot analysis of Septin7a/b protein using Zebrafish Septin7 antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~50 kDa.

Description

The Zebrafish Septin7 antibody targets Septin7, including the duplicated paralogs Septin7a and Septin7b, a conserved cytoskeletal GTP-binding protein essential for filament formation, membrane compartmentalization, and cell division in Danio rerio. Zebrafish, also known as Danio rerio, express septin7 paralogs broadly throughout embryogenesis, with prominent expression in neural tissues, somites, epithelia, and developing organs where cytoskeletal organization and membrane remodeling are critical. Septin7 localizes to the cytoplasm and cell cortex, assembling into hetero-oligomeric septin filaments that associate with actin and microtubules to define diffusion barriers and support cell shape and polarity.

Septin7 is a core member of the septin family and acts as a central scaffold required for stable septin complex assembly. It contains a conserved GTP-binding domain and C-terminal coiled-coil regions that mediate polymerization and higher-order filament formation. In zebrafish embryos, septin7a and septin7b expression increases during periods of active morphogenesis, neurulation, and epithelial differentiation. A Zebrafish Septin7 antibody is suitable for detecting cytoplasmic and cortical localization patterns associated with septin ring formation, cytokinetic structures, and membrane-associated cytoskeletal networks.

Functionally, Septin7 is indispensable for cytokinesis, cell polarity, and tissue architecture. Septin filaments formed around the cleavage furrow act as diffusion barriers and provide mechanical support during cell division. In zebrafish, Septin7 contributes to neural tube formation, axon guidance, somitogenesis, and epithelial integrity by organizing cytoskeletal interfaces and stabilizing membrane domains. Septin7 also participates in vesicle trafficking, ciliogenesis, and cell migration by coordinating actin-microtubule cross-talk. Disruption of septin7 paralogs can result in cytokinetic failure, abnormal cell morphology, impaired tissue layering, and defects in organ development due to loss of cytoskeletal compartmentalization.

Structurally, zebrafish Septin7a and Septin7b contain conserved GTPase motifs required for nucleotide binding and filament dynamics, along with interaction domains that recruit other septins into stable hetero-oligomers. These complexes assemble into rings, gauzes, and filaments positioned at the plasma membrane, cleavage furrow, and along intracellular membranes. The zebrafish septin7a gene maps to chromosome 13 and septin7b to chromosome 5, with overlapping but context-dependent expression regulated by developmental cues that control proliferation, polarity, and morphogenetic movement. Co-localization studies detect Septin7 in cortical bands, cleavage furrows, neurite shafts, and epithelial junctions, often overlapping with actin filaments, microtubules, and membrane-associated scaffolding proteins.

A Zebrafish Septin7 antibody is suitable for detecting Septin7 in studies focused on cytoskeletal organization, cytokinesis, cell polarity, membrane compartmentalization, and tissue morphogenesis in Danio rerio. Its characteristic filamentous and cortical localization enables researchers to map septin architecture, analyze defects in cell division and polarity, and investigate how septin-based scaffolds integrate with actin and microtubule networks during development. Because septins play central roles in maintaining cellular organization across tissues, Septin7 is widely used as a marker for cytoskeletal integrity and morphogenetic regulation in zebrafish systems. 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 Septin7 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Septin7 recombinant protein (amino acids M1-K348) was used as the immunogen for the Zebrafish Septin7 antibody.

Storage

After reconstitution, the Zebrafish Septin7 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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