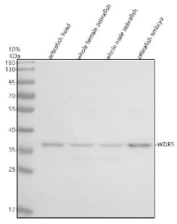
Zebrafish Wdr5 Antibody / WD repeat-containing protein 5 (RZ1156)

Catalog No.	Formulation	Size
RZ1156	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	Q7ZTX2
Applications	Western blot: 0.5-1 ug/ml
Limitations	This Zebrafish Wdr5 antibody is available for research use only.



Zebrafish Wdr5 Antibody Tissue WB. Western blot analysis of Wdr5 protein using Zebrafish Wdr5 antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~36 kDa.

Description

Zebrafish (Danio rerio) Wdr5 antibody detects Wdr5, a highly conserved chromatin-associated protein that plays central roles in histone modification, gene activation, and developmental patterning. Encoded in zebrafish by the wdr5 gene, WD repeat-containing protein 5 is a core component of COMPASS and MLL/SET1 methyltransferase complexes, which catalyze histone H3 lysine 4 (H3K4) methylation. This epigenetic modification marks active promoters and enhancers, guiding lineage specification and transcriptional programs essential for embryogenesis. Because the regulation of chromatin accessibility is fundamental to vertebrate development, Zebrafish Wdr5 antibody reagents support research in transcriptional control, epigenetic regulation, and stem cell biology.

Wdr5 acts as a structural scaffold that stabilizes interactions between SET-domain methyltransferases and accessory subunits within the H3K4 methylation complexes. Through its WD repeats, Wdr5 binds histone H3 peptides and promotes assembly of catalytically active methyltransferase machinery. In zebrafish embryos, wdr5 expression is enriched in rapidly proliferating tissues, including early neural structures, somites, cardiac primordia, and endoderm-derived organs. These regions require coordinated activation of transcriptional networks that guide cell fate, tissue patterning, and morphogenetic transitions.

Because H3K4 methylation is associated with transcriptional activation, Wdr5 influences multiple developmental processes. In vertebrate systems, Wdr5-mediated chromatin modification regulates gastrulation, neural crest formation, heart development, and hematopoietic lineage emergence. Zebrafish studies demonstrate that perturbing wdr5 disrupts gene expression programs, leading to defects in tissue organization, axis formation, and organ morphology. These outcomes underscore the conserved requirement for Wdr5 in orchestrating transcriptional landscapes that shape embryonic development.

Wdr5 also interacts with transcription factors and regulatory complexes beyond COMPASS. It participates in chromatin looping, enhancer-promoter communication, and recruitment of transcriptional activators. These functions position Wdr5 as an integrator of epigenetic and transcriptional inputs. In zebrafish development, this integration allows cells to transition between proliferative and differentiated states by modulating chromatin accessibility at key developmental loci.

At the molecular level, Wdr5 contains multiple WD repeat domains that form a beta-propeller fold, enabling stable interactions with numerous protein partners. Its conserved arginine-binding pocket recognizes histone H3 residues, a feature essential for the specificity of H3K4 methylation. Subcellular localization of Wdr5 is predominantly nuclear, where it associates with chromatin in regions of active transcription. In zebrafish embryos, dynamic Wdr5 distribution correlates with shifts in transcriptional demand across developmental stages.

Wdr5 has also been implicated in cell cycle regulation, stem cell maintenance, and signaling pathway integration. In mammalian systems, Wdr5 is necessary for self-renewal of embryonic stem cells and influences differentiation pathways through H3K4 methylation-dependent mechanisms. Zebrafish provide a powerful platform for visualizing how these chromatin-driven processes shape lineage transitions, neural development, and organogenesis in vivo.

A Zebrafish Wdr5 antibody is suitable for research applications such as western blotting, immunohistochemistry, and assays examining chromatin modification, transcriptional regulation, and developmental epigenetics. This antibody targets Wdr5 for studies involving H3K4 methylation, gene activation, and vertebrate embryonic patterning. NSJ Bioreagents provides the Zebrafish Wdr5 antibody to support research in chromatin biology and transcriptional control.

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

Application Notes

Optimal dilution of the Zebrafish Wdr5 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Wdr5 recombinant protein (amino acids Q25-D324) was used as the immunogen for the Zebrafish Wdr5 antibody.

Storage

After reconstitution, the Zebrafish Wdr5 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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