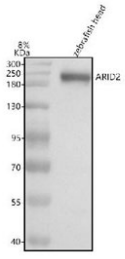
Zebrafish Arid2 Antibody / AT-rich interactive domain-containing protein 2 (RZ1121)

Catalog No.	Formulation	Size
RZ1121	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	A0JPE6
Applications	Western Blot : 0.5-1 ug/ml
Limitations	This Zebrafish Arid2 antibody is available for research use only.



Zebrafish Arid2 Antibody WB. Western blot analysis of Arid2 protein using zebrafish Arid2 antibody and zebrafish head tissue lysate. The predicted molecular weight of ARID2 is ~197 kDa.

Description

Zebrafish (Danio rerio) Arid2 antibody detects Arid2, a key chromatin remodeling factor and core component of the SWI/SNF (BAF) regulatory complex. Arid2, also known as AT-rich interactive domain-containing protein 2, contributes to transcriptional control by modulating nucleosome positioning and facilitating access of transcription factors to DNA. In zebrafish, the arid2 gene encodes a protein with conserved ARID and RFX-type domains that enable sequence-specific DNA interaction and recruitment of chromatin-modifying machinery. Because Arid2 has widespread influence on gene regulation, differentiation, and tissue patterning, Zebrafish Arid2 antibody reagents are widely used in developmental

biology and epigenetic research.

During zebrafish embryogenesis, arid2 is expressed in multiple developing tissues, including neural structures, somites, heart progenitors, and endoderm-derived organs. These expression patterns align with essential roles of the SWI/SNF complex in orchestrating lineage specification and regulating transcriptional responses to developmental cues. In vertebrates, ARID2-containing SWI/SNF assemblies, often termed PBAF complexes, are required for establishing appropriate chromatin landscapes that allow correct activation or repression of developmental gene networks. Zebrafish studies further suggest that Arid2 contributes to neural crest specification, cardiac development, and early organogenesis by influencing chromatin accessibility at lineage-defining genes.

At the molecular level, Arid2 facilitates binding of the SWI/SNF complex to regulatory DNA regions enriched with AT-rich motifs. Its ARID domain provides DNA interaction specificity, while its additional functional modules support recruitment of chromatin remodelers and transcriptional co-factors. Through these interactions, AT-rich interactive domain-containing protein 2 influences nucleosome sliding, eviction, and remodeling, allowing rapid transcriptional adaptation during developmental transitions. In zebrafish, these activities are crucial during periods of high transcriptional flux, such as axis formation, neural patterning, and heart tube morphogenesis.

Arid2 also contributes to DNA damage response regulation and genomic stability. Studies in vertebrate models demonstrate that ARID2 loss disrupts DNA repair pathways, sensitizes cells to replication stress, and alters chromatin organization. Because zebrafish embryos undergo rapid cell divisions, effective chromatin maintenance mechanisms are essential for preserving genome integrity. Arid2-dependent remodeling may help coordinate responses to developmental stress, supporting proper tissue formation and cellular resilience.

In addition to its developmental functions, Arid2 plays key roles in regulating immune signaling and transcriptional programs governing inflammation. Although these roles are more extensively characterized in mammals, conserved domains suggest similar regulatory potential in zebrafish. Understanding Arid2 function in these pathways may reveal how chromatin remodeling integrates environmental signals with gene expression dynamics during early development.

Subcellular localization of Arid2 is predominantly nuclear, consistent with its role in transcriptional and chromatin regulatory complexes. It interacts with SWI/SNF subunits such as BRG1, BAF200, BAF180, and associated transcription factors that guide complex recruitment to target loci. Zebrafish models allow powerful visualization and functional testing of these interactions in vivo, helping uncover lineage-specific regulatory mechanisms.

A Zebrafish Arid2 antibody is suitable for research applications such as western blotting, immunohistochemistry, and assays examining chromatin remodeling, transcriptional regulation, and developmental gene networks. This antibody targets Arid2 for studies in epigenetic control, organogenesis, and vertebrate developmental biology. NSJ Bioreagents provides the Zebrafish Arid2 antibody to support investigations in chromatin dynamics and gene regulatory mechanisms.

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

Application Notes

Optimal dilution of the Zebrafish Arid2 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Arid2 recombinant protein (amino acids E11-R30) was used as the immunogen for the Zebrafish Arid2 antibody.

Storage

After reconstitution, the Zebrafish Arid2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Copyright © NSJ Bioreagents. All rights reserved.