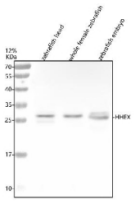
Zebrafish Hhex Antibody / Hex / Hematopoietically expressed homeobox protein (RZ1229)

Catalog No.	Formulation	Size
RZ1229	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	Q9IAV3
Applications	Western Blot: 0.5-1ug/ml
Limitations	This Zebrafish Hhex antibody is available for research use only.



Zebrafish Hhex Antibody Tissue WB. Western blot analysis of Hhex protein using Zebrafish Hhex antibody and 1) zebrafish head, 2) whole female zebrafish and 3) zebrafish embryo tissue lysate. Predicted molecular weight ~26 kDa.

Description

The Zebrafish Hhex antibody targets Hhex, a homeobox transcription factor essential for endoderm development, foregut patterning, hematopoietic specification, and organogenesis in Danio rerio. Zebrafish, also known as Danio rerio, express hhex (also called hex) early in the endoderm and mesoderm, where it contributes to the formation of the liver, thyroid, pancreas, and vascular progenitor populations. Hhex localizes to the nucleus and functions as a transcriptional regulator that binds specific DNA motifs to activate or repress gene networks required for organ primordia formation, lineage specification, and embryonic tissue organization.

Hhex belongs to the hematopoietically expressed homeobox protein family, a conserved group of transcription factors governing foregut endoderm identity and early hematopoietic development. In zebrafish embryos, hhex expression is detected in the anterior endoderm, forming liver and thyroid precursors, as well as in hemangioblast territories that give rise to primitive blood and endothelial cells. This dual expression pattern reflects Hhex's central role in coordinating both endodermal organ formation and early hematopoietic lineage specification. A Zebrafish Hhex antibody is suitable for research applications examining nuclear expression in developing endodermal tissues and progenitor cells contributing to blood and vasculature.

Functionally, Hhex regulates transcriptional programs required for hepatoblast specification, thyroid follicle initiation, and pancreatic primordium formation. It interacts with key developmental pathways, including Wnt, Fgf, and Bmp signaling, to define organ boundaries and promote maturation of foregut derivatives. In hematopoietic tissues, Hhex supports the emergence of early erythroid and myeloid progenitors by modulating gene networks that govern hemangioblast identity. Loss of hhex disrupts liver and thyroid development, causes defects in foregut morphogenesis, and alters blood formation, highlighting its broad regulatory influence across multiple embryonic systems.

Structurally, zebrafish Hhex contains the conserved 60 amino acid homeodomain responsible for DNA binding, flanked by regulatory regions that interact with co-factors to refine transcriptional output. Zebrafish hhex maps to chromosome 1, where enhancer elements respond to endoderm patterning cues and vascular specification signals. Co-localization studies frequently identify Hhex in liver bud progenitors, thyroid precursors, and hemangioblast populations marked by gata1a, lmo2, or scl/tal1. These distribution patterns reflect its integrated role in linking transcriptional regulation to early organogenesis and hematopoietic development.

A Zebrafish Hhex antibody is suitable for detecting Hhex in studies focused on foregut endoderm development, hematopoietic lineage formation, organ primordia specification, and transcriptional control mechanisms in Danio rerio. Its nuclear localization provides clear visualization of early progenitor populations that contribute to the liver, thyroid, pancreas, and blood system. Researchers rely on Hhex as a marker for defining endodermal organ territories, mapping early hematopoietic emergence, and evaluating genetic or environmental disruptions to core developmental pathways. These properties make the antibody valuable for studies in developmental biology, vertebrate organogenesis, hematopoietic specification, and gene regulatory network analysis, and this reagent 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 Hhex antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Hhex recombinant protein (amino acids Y60-L228) was used as the immunogen for the Zebrafish Hhex antibody.

Storage

After reconstitution, the Zebrafish Hhex 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.