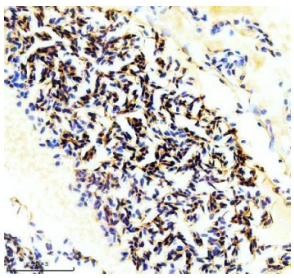
Zebrafish HBBE3 Antibody / Embryonic Hemoglobin Beta Antibody (RZ1370)

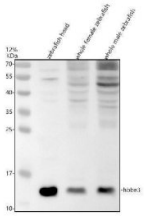
Catalog No.	Formulation	Size
RZ1370	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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	Q5BLF6
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish HBBE3 Antibody / Embryonic Hemoglobin Beta Antibody is available for research use only.



Zebrafish HBBE3 Antibody Erythrocyte IHC. Immunohistochemistry analysis of HBBE3 using Zebrafish HBBE3 Antibody / Embryonic Hemoglobin Beta Antibody demonstrates strong cytoplasmic HRP-DAB brown staining within erythrocyte populations. The staining pattern is consistent with expression of Hemoglobin Beta Embryonic-3 (HBBE3), a beta-globin subunit involved in embryonic hemoglobin formation and oxygen transport during early zebrafish development. Robust staining of nucleated erythroid cells highlights the role of HBBE3 in primitive erythropoiesis and developing blood cell populations. The observed immunoreactivity supports the use of HBBE3 as a marker for embryonic erythrocytes, hematopoietic development, and studies of globin gene expression in zebrafish models. Heat-mediated antigen retrieval was performed in EDTA buffer prior to staining.



Zebrafish HBBE3 Antibody Western Blot. Western blot analysis of HBBE3 using Zebrafish HBBE3 Antibody / Embryonic Hemoglobin Beta Antibody demonstrates a distinct immunoreactive band at approximately 16 kDa in zebrafish head, whole female, and whole male tissue lysates. The observed molecular weight is consistent with the predicted size of Hemoglobin Beta Embryonic-3 (HBBE3), a beta-globin family member involved in embryonic hemoglobin formation and oxygen transport during early development. Comparable detection across the tested samples supports recognition of HBBE3 in zebrafish tissues and confirms antibody specificity for the target protein. The observed immunoreactivity demonstrates the utility of this antibody for studies of erythropoiesis, globin gene expression, hematopoietic development, and embryonic oxygen transport pathways in zebrafish models.

Description

Zebrafish HBBE3 Antibody / Embryonic Hemoglobin Beta Antibody recognizes Hemoglobin Beta Embryonic-3 (HBBE3), a beta-globin family member expressed during early zebrafish development. HBBE3 contributes to the formation of embryonic hemoglobin complexes that enable oxygen transport during the earliest stages of embryogenesis. Because embryonic globin genes exhibit highly regulated temporal and spatial expression patterns, HBBE3 serves as a valuable marker for primitive erythropoiesis and early hematopoietic development in zebrafish models.

Hemoglobin is a tetrameric oxygen-carrying protein composed of alpha-like and beta-like globin subunits surrounding heme prosthetic groups. During development, distinct globin genes are expressed at different stages to meet the changing oxygen transport requirements of the embryo and adult organism. HBBE3 belongs to the embryonic beta-globin program and is primarily associated with primitive erythroid cells generated during early hematopoiesis. Expression of HBBE3 declines as developmental globin switching occurs and adult globin genes become predominant.

Zebrafish have emerged as an important model for studying vertebrate hematopoiesis, erythrocyte differentiation, globin regulation, and blood-related diseases. The optical transparency of embryos allows direct visualization of circulating erythrocytes and vascular development, making globin markers such as HBBE3 valuable tools for developmental studies. Analysis of HBBE3 expression can provide insight into primitive blood cell formation, erythroid lineage specification, and the molecular mechanisms regulating embryonic oxygen transport.

Because globin gene expression is tightly controlled during development, HBBE3 is frequently studied in investigations of gene regulation, developmental timing, hematopoietic disorders, and environmental influences on embryogenesis. Altered expression of embryonic globin genes may reflect changes in erythropoietic pathways, developmental stress responses, or genetic perturbations affecting blood cell formation. As a result, HBBE3 serves as a useful marker for evaluating early erythroid development in zebrafish research models.

At NSJ Bioreagents, we provide highly validated antibodies for developmental biology, hematology, and zebrafish research applications. Zebrafish HBBE3 Antibody / Embryonic Hemoglobin Beta Antibody is useful for investigations of primitive erythropoiesis, blood cell development, globin gene regulation, and embryonic hematopoietic processes. Continued study of HBBE3 is improving our understanding of vertebrate blood development and the molecular mechanisms that regulate oxygen transport during embryogenesis.

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 HBBE3 Antibody / Embryonic Hemoglobin Beta Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish HBBE3 recombinant protein (amino acids E8-Q128) was used as the immunogen for the

Zebrafish HBBE3 Antibody.

Storage

After reconstitution, the Zebrafish HBBE3 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 HBBE3 Antibody, Zebrafish Hemoglobin Beta E3 Antibody, Zebrafish Embryonic Hemoglobin Beta Antibody, Zebrafish Beta-Globin Antibody, Zebrafish Hemoglobin Subunit Beta Antibody, Zebrafish Embryonic Globin Antibody

Copyright © NSJ Bioreagents. All rights reserved.