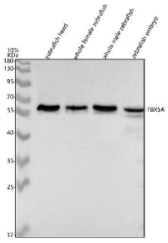
Zebrafish Tbx5a Antibody / Tbx5 / T-box protein 5a (RZ1320)

Catalog No.	Formulation	Size
RZ1320	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
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9IAK8
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Tbx5a antibody is available for research use only.



Western blot analysis of Tbx5a protein using Zebrafish Tbx5a antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~55 kDa.

Description

Zebrafish Tbx5a, also known as T-box transcription factor 5a, is a critical regulator of heart and limb development. Tbx5a is a member of the T-box family of transcription factors, which are involved in the regulation of gene expression during embryonic development. It plays a pivotal role in heart morphogenesis, especially in the formation of the cardiac chambers and conduction system, as well as in limb patterning, by controlling the expression of downstream target genes that direct cell fate and differentiation.

Zebrafish Tbx5a is an ortholog of the human TBX5 protein, sharing significant sequence conservation and functional similarity. In both zebrafish and humans, Tbx5a regulates the formation of the heart's left ventricle and is involved in the

proper patterning of the limbs during early development. Mutations in TBX5 in humans are associated with Holt-Oram syndrome, a disorder that leads to congenital heart defects and upper limb abnormalities. The conserved function of zebrafish Tbx5a makes it an ideal model for studying cardiac and limb development and for understanding the underlying genetic causes of congenital malformations.

The use of a Zebrafish Tbx5a antibody allows researchers to monitor the expression of Tbx5a in various developmental stages, particularly in the heart and limb tissues. These antibodies are invaluable for applications such as western blot, immunohistochemistry, and immunofluorescence, enabling detailed study of Tbx5a expression and its role in patterning and organogenesis. A Zebrafish Tbx5a antibody is also useful for assessing the effects of genetic mutations or environmental factors on heart and limb development.

Currently, no distinct isoforms of zebrafish Tbx5a have been identified, but its critical role in cardiac and limb development has been well documented. Using a high-quality Zebrafish Tbx5a antibody, researchers can explore the developmental pathways regulated by Tbx5a and gain insights into congenital diseases related to this transcription factor.

Application Notes

Optimal dilution of the Zebrafish Tbx5a antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Tbx5a recombinant protein (amino acids M1-S492) was used as the immunogen for the Zebrafish Tbx5a antibody.

Storage

After reconstitution, the Zebrafish Tbx5a 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.