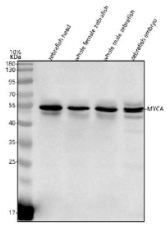
Zebrafish Myca Antibody / Myc-A / c-Myc-A (RZ1241)

Catalog No.	Formulation	Size
RZ1241	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	P52160
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Myca antibody is available for research use only.



Western blot analysis of Myca protein using Zebrafish Myca antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~48 kDa.

Description

The Zebrafish Myca antibody targets Myca (also known as Myc-A or c-Myc-A), a nuclear transcription factor essential for regulating cell proliferation, growth, metabolism, and differentiation in Danio rerio. Zebrafish, also known as Danio rerio, express myca as one of the primary myc-family proto-oncogenes active during early embryogenesis and tissue development. Myca localizes to the nucleus, where it binds DNA as part of heterodimeric complexes with Max to regulate transcriptional networks controlling cell cycle progression, ribosome biogenesis, metabolic activity, and lineage specification. Because myca is expressed strongly in rapidly dividing cells, its expression serves as a key indicator of proliferative capacity throughout development.

Myca belongs to the basic helix-loop-helix leucine zipper (bHLH-LZ) family of transcription factors, sharing strong structural and functional similarity with mammalian c-Myc. In zebrafish embryos, myca expression is enriched in neural progenitors, developing somites, endodermal and mesodermal tissues, and proliferating regions throughout organogenesis. A Zebrafish Myca antibody is suitable for research applications examining nuclear localization patterns in proliferative cell populations, developmental growth centers, and tissues undergoing transcriptional regulation of metabolic and biosynthetic pathways.

Functionally, Myca is a master regulator of cellular growth programs. It promotes transcription of genes involved in ribosomal RNA synthesis, nucleotide metabolism, mitochondrial biogenesis, and glycolytic pathways. Myca also regulates cell cycle genes including cyclins and cyclin-dependent kinases, supporting progression through G1 and S phases. In zebrafish, myca plays essential roles in neural development, somite maturation, and organ growth by influencing precursor proliferation and cell fate decisions. Misregulation of myc-family genes, including myca, is associated with abnormal growth phenotypes, impaired tissue patterning, or excessive proliferation. Because zebrafish provide a transparent and genetically tractable model, Myca expression is widely used to study growth control, oncogenic signaling, and developmental transcriptional networks.

Structurally, zebrafish Myca contains the conserved bHLH-LZ domain that mediates DNA binding and Max dimerization, allowing Myca to activate or repress gene targets depending on interacting partners and chromatin context. Zebrafish myca maps to chromosome 20, with promoter and enhancer regions responsive to developmental cues, mitogenic signals, and metabolic state. Co-localization studies frequently detect Myca in proliferative zones such as the neural tube, retinal progenitor regions, somite boundaries, and visceral organ primordia. These expression domains reflect Myca's central role in ensuring adequate growth and metabolic capacity during rapid embryonic expansion.

A Zebrafish Myca antibody is suitable for detecting Myca in studies focused on cell proliferation, metabolic regulation, developmental growth control, transcription factor networks, and oncogenic signaling in Danio rerio. Its nuclear localization provides precise visualization of actively cycling cell populations, enabling researchers to map proliferation zones, analyze developmental mutants, evaluate growth signaling pathways, and study metabolic or environmental influences on embryonic development. Myca is widely used as a marker for understanding growth regulation and proto-oncogene function across vertebrate models. This reagent is supplied for research use by NSJ Bioreagents.

Application Notes

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

Immunogen

E. coli-derived zebrafish Myca recombinant protein (amino acids K21-H419) was used as the immunogen for the Zebrafish Myca antibody.

Storage

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