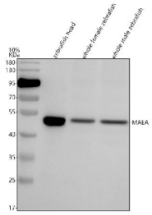
Zebrafish Maea Antibody / E3 ubiquitin-protein transferase MAEA (RZ1119)

Catalog No.	Formulation	Size
RZ1119	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	Q7SXR3
Applications	Western Blot : 0.5-1 ug/ml
Limitations	This Zebrafish Maea antibody is available for research use only.



Zebrafish Maea Antibody WB. Western blot analysis of MAEA protein using Zebrafish Maea antibody and 1) zebrafish head, 2) whole female zebrafish and 3) whole male zebrafish tissue lysate. Predicted molecular weight ~45 kDa.

Description

Zebrafish (Danio rerio) Maea antibody detects Maea, an evolutionarily conserved protein that participates in erythroblastÃ¢Â€Â“macrophage interactions, cytoskeletal organization, and ubiquitin-mediated regulatory pathways. In zebrafish, the maea gene encodes a membrane-associated factor also known as E3 ubiquitin-protein transferase MAEA, reflecting its role in ubiquitination processes that help regulate protein stability and cellÃ¢Â€Â“cell adhesion. Maea was originally characterized for its function in forming erythroblastic islands, specialized microenvironments in which developing erythroid cells adhere to central macrophages that support their maturation. Because these structures are conserved across vertebrates, zebrafish offer a powerful model for investigating Maea-dependent cell organization and

hematopoietic development.

During embryogenesis, maea is expressed in hematopoietic progenitors, macrophage lineages, vascular structures, and additional tissues requiring coordinated adhesion and differentiation. Maea contributes to erythroid expansion by stabilizing interactions between erythroblasts and macrophages, facilitating nutrient exchange, enucleation processes, and clearance of organelles during red blood cell maturation. Disruption of Maea activity in vertebrates impairs erythropoiesis, destabilizes erythroblast islands, and reduces overall hematopoietic efficiency. In zebrafish, maea expression aligns with early blood island formation and macrophage-rich tissues, supporting its conserved function in blood lineage development.

Beyond hematopoiesis, Maea participates in ubiquitination pathways that regulate cytoskeletal proteins, membrane receptors, and signaling molecules. As an E3 ubiquitin-protein transferase, MAEA facilitates the transfer of ubiquitin to specific substrates, influencing turnover, trafficking, and regulatory activity. These functions help coordinate cytoskeletal remodeling events that support adhesion dynamics, vesicle movement, and cell shape changes. In developing zebrafish tissues, proper ubiquitin-mediated control is essential for maintaining structural integrity and enabling morphogenetic movements, particularly in epithelial and endothelial cell layers.

Maea also contributes to innate immune system function through its role in macrophage biology. Its interactions support phagocytic activity, cytoskeletal anchoring, and communication with surrounding cells during tissue remodeling. Zebrafish macrophages rely on these mechanisms during inflammation, wound repair, and pathogen response, making Maea relevant for immunological studies as well as developmental research. Because macrophages play key roles in angiogenesis and tissue patterning, Maea influences multiple converging pathways during vertebrate development.

At the subcellular level, Maea localizes to plasma membranes, adhesion interfaces, and regions enriched with cytoskeletal networks. It associates with adaptor proteins, scaffolding molecules, and ubiquitin pathway components involved in modulating adhesion and morphology. Studies across vertebrates demonstrate strong conservation of MAEA structure, supporting the relevance of zebrafish models for understanding its mechanisms in cellÃ¢Â€Â“cell interaction, ubiquitin signaling, and hematopoietic island architecture.

A Zebrafish Maea antibody is suitable for research applications such as western blotting, immunohistochemistry, and assays examining hematopoiesis, macrophageÃ¢Â€Â“erythroblast interactions, and ubiquitin-dependent regulation. This antibody targets Maea for studies involving blood development, cytoskeletal organization, and vertebrate cell biology. NSJ Bioreagents provides the Zebrafish Maea antibody to support investigations in hematopoietic microenvironments and ubiquitin signaling pathways.

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

Application Notes

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

Immunogen

An E.coli-derived zebrafish Maea recombinant protein (amino acids M1-E349) was used as the immunogen for the Zebrafish Maea antibody.

Storage

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