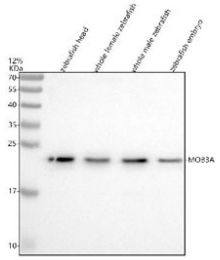
Zebrafish Mob3 Antibody / MOB kinase activator 3 / Isoforms a & b & c (RZ1083)

Catalog No.	Formulation	Size
RZ1083	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	Q7ZW91
Applications	Western Blot : 0.5-1 ug/ml
Limitations	This Zebrafish Mob3 antibody is available for research use only.



Zebrafish Mob3 Antibody WB. Western blot analysis of Mob3A/B/C protein using Zebrafish Mob3 antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~25 kDa.

Description

Zebrafish (Danio rerio) Mob3 antibody recognizes MOB kinase activator 3, a conserved cytoplasmic and nuclear signaling protein belonging to the MOB family of kinase adaptors that regulate cell proliferation, polarity, and apoptosis. In zebrafish, MOB kinase activator 3 is encoded by paralogous mob3 genes that generate isoforms a, b, and c, each contributing to developmental signaling pathways in a stage specific manner. The protein localizes to both the cytoplasm and nucleus where it interacts with serine threonine kinases, including Hippo pathway components, to coordinate growth control and tissue architecture. Because of its conserved regulatory roles, MOB kinase activator 3 is an important

developmental signaling factor and is frequently examined using reagents such as the Zebrafish Mob3 antibody in research settings.

MOB kinase activator 3 is a member of the MOB family, a group of adaptor proteins that bind and activate NDR and LATS kinases, linking extracellular cues to intracellular decisions related to cell division, organ size regulation, and cytoskeletal remodeling. In zebrafish, mob3 isoforms show widespread expression in early embryogenesis, including in the brain, somites, and developing heart, where the protein participates in regulating proliferative boundaries and maintaining cell polarity. Its conserved MOB domain enables interaction with downstream kinases involved in processes such as epithelial integrity, neuronal development, and organ morphogenesis. The secondary keyword MOB kinase activator 3 antibody is therefore often used in developmental and signaling research frameworks.

The protein's cytoplasmic localization is associated with its role in cytoskeletal control and kinase activation, while nuclear localization reflects its capacity to influence transcriptional responses to Hippo pathway signaling. MOB kinase activator 3 participates in multiple signaling contexts, including pathways tied to growth suppression, apoptosis, and tissue repair. Studies in zebrafish show that altered mob3 expression can disrupt tissue boundaries, affect somite patterning, and impair normal organogenesis. Co localization partners include members of the NDR kinase family, LATS family kinases, and cytoskeletal regulatory proteins, placing MOB3 at the intersection of polarity and proliferation pathways.

Genomically, zebrafish possess multiple mob3 loci due to teleost specific duplication events. Isoform a often appears broadly expressed during gastrulation and segmentation phases, isoform b becomes more prominent during organ differentiation, and isoform c shows enrichment in specific tissues including neural and cardiac structures. All isoforms contain a conserved MOB domain, though alternative terminal regions may affect tissue targeting or binding specificity. These isoform dependent functions highlight the protein's combinatorial regulatory potential across different developmental stages.

From a cellular perspective, MOB kinase activator 3 contributes to cytoskeletal coordination by interacting with components that regulate actin organization, spindle orientation, and cell shape transitions. Its ability to activate NDR kinases places it squarely within pathways that ensure appropriate cell cycle timing and tissue patterning. In metabolic contexts, MOB3 may support cellular energy demands during active tissue remodeling by stabilizing signaling events that link growth and metabolic regulation. Developmentally, mob3 transcripts are detected in regions undergoing rapid proliferation and differentiation, reinforcing its role in orchestrating morphogenetic processes.

Because MOB3 regulates polarity and growth control, it naturally intersects with pathways often dysregulated in models of tumorigenesis. Although zebrafish studies focus heavily on developmental biology, conserved MOB3 functions provide insights into broader mechanisms of growth regulation and cellular homeostasis. In neuronal tissues, MOB3 may guide axon targeting and cell fate decisions, while in epithelial tissues it helps maintain structural integrity by influencing junctional organization. Isoform specific expression patterns further refine these roles, making isoform sensitive detection a valuable research capability.

The Zebrafish Mob3 antibody is suitable for research applications such as immunohistochemistry, western blot analysis, and other detection formats aimed at mapping MOB3 expression across developmental stages. Most antibodies that target MOB kinase activator 3 recognize all isoforms unless specifically engineered for selective binding. This reagent is described only as recognizing MOB3 protein without implying any epitope mapping or literature validated specificity. NSJ Bioreagents supplies the Zebrafish Mob3 antibody for use in developmental signaling studies, polarity research, kinase pathway analyses, and investigations into the molecular determinants of tissue organization.

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

Application Notes

Optimal dilution of the Zebrafish Mob3 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Mob3A/B/C recombinant protein (amino acids E29-H216) was used as the immunogen for the Zebrafish Mob3 antibody. This antibody will detect the A, B and C isoforms.

Storage

After reconstitution, the Zebrafish Mob3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.