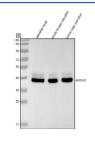


Zebrafish Myod1 Antibody / Myoblast determination protein 1 / Myogenic factor 1 (RZ1243)

Catalog No.	Formulation	Size
RZ1243	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	Q90477
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Myod1 antibody is available for research use only.



Western blot analysis of Myod1 protein using Zebrafish Myod1 antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish tissue lysate. Predicted molecular weight ~31 kDa, commonly observed at 35-45 kDa.

Description

Myod1, also called Myogenic factor 1, Myogenic differentiation 1 and Myoblast determination protein 1, is a master regulatory transcription factor that plays a central role in the specification and differentiation of skeletal muscle. In zebrafish, Myod1 is essential for the commitment of precursor cells to the myogenic lineage during embryonic development and regeneration. It acts by activating the expression of muscle specific genes and by coordinating the transition from cell proliferation to terminal differentiation.

Zebrafish Myod1 is the functional ortholog of human MYOD1. Both proteins belong to the basic helix loop helix family of

transcription factors and share a high degree of sequence and functional conservation. Like its human counterpart, zebrafish Myod1 binds to E box elements in the promoters of muscle genes to drive their expression.

During zebrafish development, Myod1 is expressed in the somites and presomitic mesoderm, where it promotes the formation of fast twitch muscle fibers. It works in concert with other myogenic regulators such as Myf5 and Myogenin to establish the muscle differentiation program. Disruption of Myod1 function in zebrafish leads to defects in muscle formation and delayed differentiation of myoblasts.

Because of its conserved role in vertebrate myogenesis, zebrafish Myod1 is widely used as a marker of muscle lineage commitment and as a tool in genetic and chemical screening to study muscle development, regeneration, and disease. It also provides a useful model for understanding the regulation of transcriptional networks in myogenic cells.

Application Notes

Optimal dilution of the Zebrafish Myod1 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Myod1 recombinant protein (amino acids M1-L275) was used as the immunogen for the Zebrafish Myod1 antibody.

Storage

After reconstitution, the Zebrafish Myod1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.