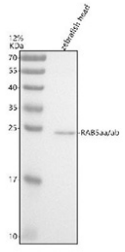
Zebrafish Rab5a Antibody / Rab5aa / Rab5ab (RZ1300)

Catalog No.	Formulation	Size
RZ1300	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	Q7ZUW5, Q7ZUG4
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Rab5a antibody is available for research use only.



Western blot analysis of Rab5aa/ab protein using Zebrafish RAB5aa/ab antibody and zebrafish head tissue lysates. Predicted molecular weight ~23 kDa.

Description

Zebrafish Rab5a is a small GTP binding protein that belongs to the Rab family, which plays a key role in vesicle trafficking within cells. Rab5a is a critical regulator of early endosome fusion and endocytic transport, influencing receptor recycling, signaling pathways, and the sorting of membrane proteins. In zebrafish, Rab5a is involved in dynamic processes during early development, where endosomal trafficking is essential for proper cell signaling and morphogenesis.

Zebrafish Rab5a is an ortholog of the human RAB5A protein and shows a high degree of sequence and functional conservation with its human counterpart. Similar to human RAB5A, zebrafish Rab5a acts as a molecular switch by cycling between an active GTP bound form and an inactive GDP bound form, controlling the recruitment of effectors necessary

for vesicle docking and fusion.

In zebrafish, Rab5a exists in 2 isoforms, Rab5aa and Rab5ab. Both isoforms are expressed during embryogenesis and play overlapping but sometimes distinct roles in endosomal dynamics. Rab5aa is often the primary isoform examined in studies of receptor mediated endocytosis, while Rab5ab may have specialized roles in certain tissues or stages of development. The presence of these 2 isoforms provides a unique model to investigate how variations in Rab5 function can impact cellular trafficking pathways.

Antibodies against zebrafish Rab5a protein are valuable for research focusing on vesicle transport, endocytosis, receptor regulation, and developmental biology. The functional similarity between zebrafish Rab5a and human RAB5A also makes this protein an important model for studying conserved mechanisms of intracellular trafficking across species.

Application Notes

Optimal dilution of the Zebrafish Rab5a antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Rab5a recombinant protein (amino acids M1-N216) was used as the immunogen for the Zebrafish Rab5a antibody.

Storage

After reconstitution, the Zebrafish Rab5a antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.