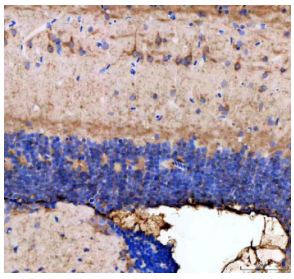
Zebrafish Dnm1 Antibody / Dnm1a / Dnm1b / Dynamin (RZ1219)

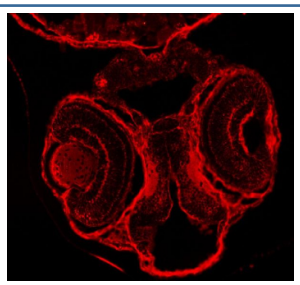
Catalog No.	Formulation	Size
RZ1219	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

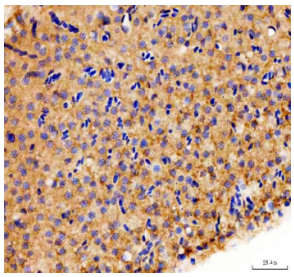
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	A0A8M2BG30, A0A8M2BCU8
Localization	Cytoplasm
Applications	Immunofluorescence : 5ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish Dnm1 antibody is available for research use only.



IHC staining of FFPE zebrafish brain tissue with Zebrafish Dnm1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Immunofluorescent staining of DNM1a/b protein using Zebrafish DNM1 antibody (red) and FFPE zebrafish embryo tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE zebrafish liver tissue with Zebrafish Dnm1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Dnm1, or dynamin one, is a neuron-specific member of the dynamin family of large GTPase enzymes that are involved in membrane remodeling processes such as endocytosis and vesicle trafficking. In zebrafish, Dnm1 plays a critical role in the nervous system by facilitating the recycling of synaptic vesicles and maintaining efficient neurotransmission.

Zebrafish express multiple dnm1 transcript variants that give rise to isoform a and isoform b, which may differ in their tissue distribution, regulatory elements, or functional properties. Both isoforms contribute to the dynamic regulation of synaptic membranes but may be expressed at different developmental stages or in distinct neuronal populations.

Dnm1 isoform a is typically expressed during early neural development and is enriched in regions of the brain with high synaptic activity. It supports the rapid and repeated cycles of vesicle fission that are essential for sustained neurotransmitter release.

Dnm1 isoform b may have overlapping or complementary roles to isoform a, potentially contributing to synaptic maintenance or plasticity in mature neurons. It may also be involved in neural differentiation and axonal growth during zebrafish development.

Because of its essential function in synaptic physiology, zebrafish Dnm1 is a widely used model for studying neural development, synaptic transmission, and neurological disorders associated with defects in vesicle recycling. It is particularly valuable in research on seizure susceptibility and developmental brain disorders, where Dnm1 mutations are known to have pathogenic effects in other vertebrates.

Application Notes

Optimal dilution of the Zebrafish Dnm1 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Dnm1a/b recombinant protein (amino acids G614-D666) was used as the immunogen for the Zebrafish Dnm1 antibody. This antibody will detect the a & b isoforms.

Storage

After reconstitution, the Zebrafish Dnm1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.