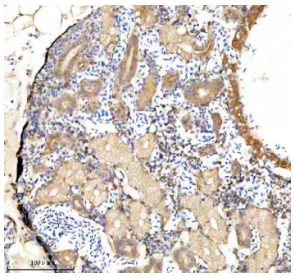
Zebrafish Gabarap Antibody / Gamma-aminobutyric acid receptor-associated protein / Isoforms a & b (RZ1091)

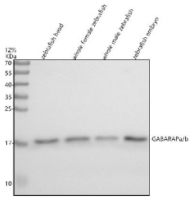
Catalog No.	Formulation	Size
RZ1091	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

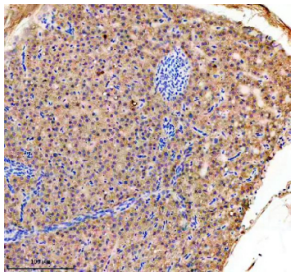
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q6NZZ7
Localization	Cytoplasm
Applications	Western blot: 0.5-1 ug/ml Immunohistochemistry (FFPE): 2-5 ug/ml
Limitations	This Zebrafish Gabarap antibody is available for research use only.



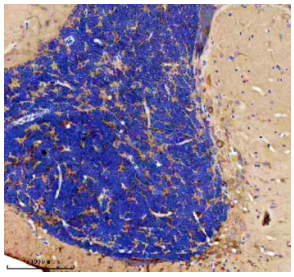
Zebrafish Gabarap Antibody Kidney IHC. Immunohistochemistry staining of FFPE zebrafish kidney tissue with Zebrafish Gabarap antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



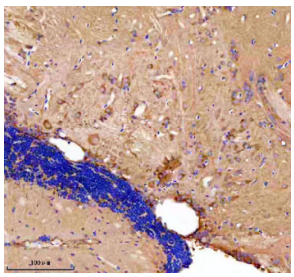
Zebrafish Gabarap Antibody WB. Western blot analysis of Gabarapa/b protein using Zebrafish Gabarap antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight: 14-16 kDa.



Zebrafish Gabarap Antibody Liver IHC. Immunohistochemistry staining of FFPE zebrafish liver tissue with Zebrafish Gabarap antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Gabarap Antibody Cerebellum IHC. Immunohistochemistry staining of FFPE zebrafish cerebellum tissue with Zebrafish Gabarap antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Gabarap Antibody Brain IHC. Immunohistochemistry staining of FFPE zebrafish brain tissue with Zebrafish Gabarap antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Zebrafish (Danio rerio) Gabarap antibody detects Gamma-aminobutyric acid receptor-associated protein, a ubiquitin-like autophagy regulator involved in membrane trafficking, receptor transport, and the formation of autophagosomes. In zebrafish, gabarap genes encode isoforms a and b, both of which share strong structural conservation with mammalian GABARAP proteins. These proteins contain a ubiquitin-like fold that enables interactions with ATG proteins, cytoskeletal components, and receptor trafficking machinery. Because of its dual functions in autophagy and synaptic receptor transport, Gamma-aminobutyric acid receptor-associated protein antibody reagents are widely used in developmental, neurological, and cellular physiology studies.

Gabarap is a key component of the autophagy pathway, where it contributes to autophagosome maturation, membrane expansion, and cargo recruitment. Alongside other ATG8 family members, Gabarap undergoes lipidation and associates with autophagic membranes to guide vesicle closure and fusion with lysosomes. In zebrafish embryos, gabarap expression is detectable in neural tissues, muscle, gastrointestinal structures, and other metabolically active regions, reflecting autophagy's broad developmental importance. Loss of gabarap activity can impair autophagic flux, disrupt cellular homeostasis, and alter tissue organization during early development.

Beyond autophagy, Gabarap plays important roles in receptor trafficking and synaptic regulation. The protein was

originally identified through its interaction with GABA(A) receptors, where it assists in receptor clustering, membrane delivery, and stabilization at synaptic sites. In vertebrates, these functions contribute to inhibitory synaptic transmission, neuronal excitability control, and synapse maturation. Zebrafish studies support similar involvement in neurotransmission, with gabarap expression patterns overlapping with developing neural circuits and synaptic regions.

At the subcellular level, Gabarap localizes to cytoplasmic vesicles, autophagic membranes, synaptic compartments, and cytoskeletal contact sites. Known interaction partners include ATG7, ATG3, PLEKHM1, GABA(A) receptor subunits, and proteins involved in microtubule binding or vesicle fusion. These partnerships allow Gabarap to coordinate membrane trafficking between autophagosomes, endosomes, and synaptic vesicles, integrating degradative and signaling pathways within the cell. Isoforms a and b share core functional properties but may differ in tissue distribution or regulatory dynamics during embryogenesis.

Functionally, Gabarap contributes to cellular survival under metabolic stress by supporting autophagic recycling of proteins and organelles. In developing tissues, this activity ensures proper turnover of damaged components and supports energy balance. The protein also participates in cytoskeletal organization by interacting with microtubule associated proteins, influencing vesicle transport and structural stability during tissue morphogenesis. These properties make zebrafish an advantageous system for studying Gabarap function in vivo, particularly in contexts involving neurodevelopment, muscle differentiation, and metabolic adaptation.

The Zebrafish Gabarap antibody is suitable for research applications such as western blotting, immunohistochemistry, and other assays examining autophagy, receptor trafficking, and synaptic organization. This reagent detects endogenous Gabarap isoforms without implying epitope mapping or literature validated specificity. NSJ Bioreagents provides the Zebrafish Gabarap antibody to support research in autophagy, neuronal development, receptor transport, and cellular homeostasis in vertebrate models.

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

Application Notes

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

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of zebrafish Gabarapa/b was used as the immunogen for the Zebrafish Gabarap antibody. This antibody will detect the a and b isoforms.

Storage

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

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