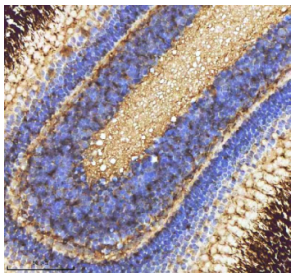
Zebrafish Caspase 9 Antibody / Casp9 (RZ1208)

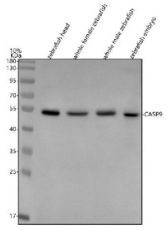
Catalog No.	Formulation	Size
RZ1208	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

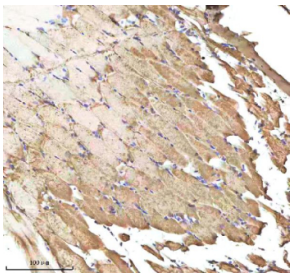
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	F1QSB1
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish Caspase 9 antibody is available for research use only.



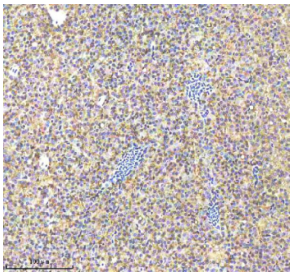
Zebrafish Caspase 9 Antibody Eye Tissue IHC. Immunohistochemistry staining of FFPE zebrafish eye tissue with Zebrafish Caspase 9 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



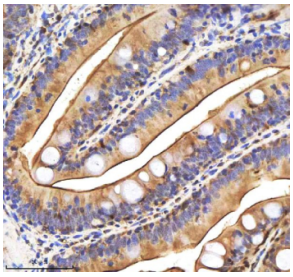
Zebrafish Caspase 9 Antibody Tissue WB. Western blot analysis of Caspase 9 protein using Zebrafish Caspase 9 antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~48 kDa.



Zebrafish Caspase 9 Antibody Muscle Tissue IHC. Immunohistochemistry staining of FFPE zebrafish muscle tissue with Zebrafish Caspase 9 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Caspase 9 Antibody Liver Tissue IHC. Immunohistochemistry staining of FFPE zebrafish liver tissue with Zebrafish Caspase 9 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Caspase 9 Antibody Colon Tissue IHC. Immunohistochemistry staining of FFPE zebrafish colon tissue with Zebrafish Caspase 9 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

The Zebrafish Caspase 9 antibody targets Caspase 9, an initiator caspase that regulates intrinsic apoptosis, mitochondrial stress responses, and developmental cell death programs in Danio rerio. Zebrafish, also known as Danio rerio, express casp9 as a core component of the apoptosome, where it functions downstream of cytochrome c release to activate executioner caspases. Caspase 9 is synthesized as an inactive zymogen and activated through recruitment to Apaf1-containing apoptosomes. It localizes primarily to the cytoplasm and mitochondria-associated regions, reflecting its role in mitochondrial-mediated apoptosis during embryogenesis and tissue remodeling.

Casp9 belongs to the caspase family of cysteine proteases, specifically the group of initiator caspases responsible for detecting and responding to cellular stress and damage. In zebrafish embryos, casp9 expression contributes to shaping tissues where programmed cell death is required for morphogenesis, including the brain, somites, craniofacial structures, and developing fins. A Zebrafish Caspase 9 antibody is suitable for research applications examining cytoplasmic localization, apoptotic patterning, and mitochondrial stress responses across early developmental stages.

Caspase 9 serves as the principal initiator of intrinsic apoptosis. Following mitochondrial permeabilization, cytochrome c release triggers Apaf1 oligomerization, forming the apoptosome that activates Casp9. Downstream targets include effector caspases that mediate chromatin condensation, membrane blebbing, and controlled cellular dismantling. In zebrafish, Casp9-driven apoptosis is essential for sculpting neuroepithelial domains, clearing transient cell populations, and regulating organogenesis in tissues such as the heart, liver, and eye. Casp9 also participates in stress-induced apoptotic pathways during environmental challenges, chemical exposure, or developmental abnormalities.

Structurally, zebrafish Casp9 contains the conserved caspase recruitment domain (CARD) required for apoptosome engagement, followed by large and small catalytic subunits generated upon cleavage. These structural regions are characteristic of initiator caspases and enable proximity-induced activation within the apoptosome complex. Zebrafish casp9 maps to chromosome 17, with regulatory elements driving expression in neurogenic tissues and regions subject to programmed cell elimination. Co-localization studies often detect Casp9 alongside mitochondrial markers, activated

effector caspases, or regulators of intrinsic apoptosis, highlighting its central role in apoptotic progression.

A Zebrafish Caspase 9 antibody is suitable for detecting Casp9 in developmental studies focused on apoptosis regulation, mitochondrial integrity, neural pruning, and organ formation in Danio rerio. Its cytoplasmic and mitochondrial-associated labeling patterns provide insight into where intrinsic apoptosis shapes tissue architecture and supports morphogenetic transitions across embryonic and larval stages. Casp9 expression can increase during stress exposure or genetic perturbations, making it a valuable marker for research examining cellular resilience, mitochondrial stress responses, and apoptotic signaling networks. These features support investigations into programmed cell death and developmental tissue remodeling, and this reagent is supplied for research use by NSJ Bioreagents.

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

Application Notes

Optimal dilution of the Zebrafish Caspase 9 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Caspase 9 recombinant protein (amino acids K18-Q417) was used as the immunogen for the Zebrafish Caspase 9 antibody.

Storage

After reconstitution, the Zebrafish Caspase 9 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.