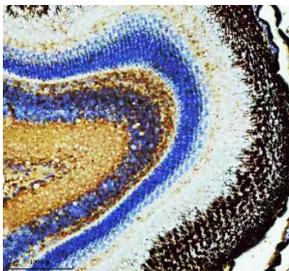


Zebrafish Ppp2ca Antibody / Pp2a alpha (RZ1066)

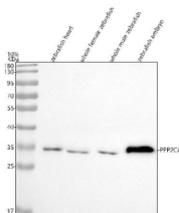
| Catalog No. | Formulation | Size |
|-------------|---|--------|
| RZ1066 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

[Bulk quote request](#)

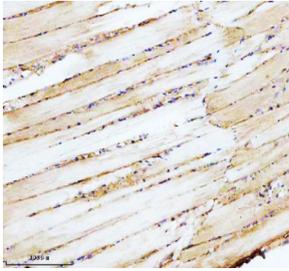
| | |
|---------------------------|---|
| Availability | 2-3 weeks |
| Species Reactivity | Zebrafish |
| Format | Antigen affinity purified |
| Host | Rabbit |
| Clonality | Polyclonal (rabbit origin) |
| Isotype | Rabbit Ig |
| Purity | Antigen affinity chromatography |
| Buffer | Lyophilized from 1X PBS with 2% Trehalose |
| UniProt | Q567Y8 |
| Applications | Western Blot : 0.5-1 ug/ml Immunohistochemistry (FFPE) : 2-5 ug/ml |
| Limitations | This Zebrafish Ppp2ca antibody is available for research use only. |



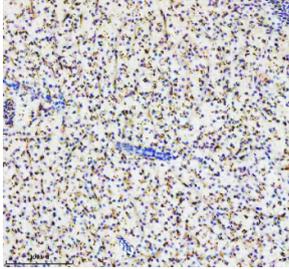
Zebrafish Ppp2ca Antibody Retina IHC. Immunohistochemistry staining of FFPE zebrafish retina tissue with Ppp2ca antibody, HRP secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Ppp2ca Antibody WB. Western blot analysis of Ppp2ca protein using Zebrafish Ppp2ca antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~36 kDa.



Zebrafish Ppp2ca Antibody Skeletal Muscle IHC. Immunohistochemistry staining of FFPE zebrafish skeletal muscle tissue with Ppp2ca antibody, HRP secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Ppp2ca Antibody Liver IHC. Immunohistochemistry staining of FFPE zebrafish liver tissue with Ppp2ca antibody, HRP secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Zebrafish (*Danio rerio*) Ppp2ca antibody recognizes Pp2a alpha, the catalytic alpha subunit of protein phosphatase 2A, encoded by the zebrafish ppp2ca gene. Pp2a alpha is a core serine-threonine phosphatase that forms the enzymatic center of multiple PP2A holoenzymes, each assembled with distinct regulatory subunits to target specific substrates. In *Danio rerio* embryos, Ppp2ca expression begins early and is broadly distributed, with enriched localization in neural tissues, somites, notochord, heart, vasculature, and developing endoderm-derived organs such as liver and pancreas. Subcellular localization spans cytoplasm, nucleus, and membrane-associated regions, reflecting PP2A's broad influence across signaling networks and cell cycle control.

Pp2a alpha serves as a major regulator of phosphorylation-dependent processes that shape early development. PP2A controls key signaling pathways including MAPK, Akt, Wnt, and cell-cycle regulatory networks. By dephosphorylating transcription factors, kinases, cytoskeletal proteins, and chromatin regulators, Pp2a alpha integrates multiple developmental cues to maintain balanced signaling outputs. Because zebrafish embryos undergo rapid proliferation and differentiation, Ppp2ca activity is essential for modulating growth signals, preventing aberrant activation of stress pathways, and supporting proper morphogenesis.

Neural development relies heavily on PP2A-mediated regulation. In the developing brain and spinal cord, Pp2a alpha controls phosphorylation states of proteins involved in neural progenitor proliferation, neuroepithelial polarity, axon specification, and synaptic maturation. Balanced PP2A activity is required for establishing regional identity and guiding neural circuit formation. Disruption of PP2A function can produce defects in neural tube organization, altered differentiation timing, or impaired neuronal survival.

Cardiac and vascular development also depend on Pp2a alpha. During early cardiogenesis, PP2A contributes to regulation of cardiomyocyte contractility, sarcomere assembly, stress-response signaling, and chamber morphogenesis. In endothelial tissues, Pp2a alpha regulates pathways that guide angiogenic sprouting, cell junction stability, and vascular remodeling. Because phosphorylation dynamics control endothelial responsiveness to mechanical and biochemical cues, Ppp2ca function is required for proper vessel patterning and hemodynamic adaptation.

Somite and skeletal muscle development require tight control of phosphoregulation. Pp2a alpha influences cytoskeletal remodeling, muscle fiber alignment, and differentiation by modulating activity of myogenic transcription factors and structural proteins. Zebrafish somites depend on coordinated phosphorylation cycles to support segmentation, myotome boundary formation, and contractile maturation, making Ppp2ca indispensable for early muscle architecture.

Endoderm-derived organs also rely on PP2A activity. Developing liver and pancreas undergo extensive metabolic and

transcriptional reorganization during differentiation. Pp2a alpha regulates enzymes and transcription factors involved in metabolic programming, proliferation, and stress resilience. Proper PP2A activity ensures homeostasis of signaling networks that drive organ expansion and functional specification.

This Zebrafish Ppp2ca antibody is suitable for detecting Pp2a alpha in research focused on phosphoregulation, neural development, cardiac and vascular formation, muscle differentiation, and metabolic organogenesis in zebrafish. NSJ Bioreagents provides this reagent within its zebrafish and signaling-regulation antibody collection.

This Zebrafish antibody is part of a [broader Zebrafish / Danio rerio antibody panel](#) offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the Zebrafish Ppp2ca antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Ppp2ca recombinant protein (amino acids M1-L249) was used as the immunogen for the Zebrafish Ppp2ca antibody.

Storage

After reconstitution, the Zebrafish Ppp2ca antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.