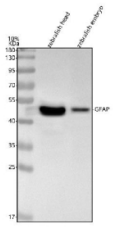
Zebrafish Gfap Antibody / Glial fibrillary acidic protein (RZ1225)

Catalog No.	Formulation	Size
RZ1225	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	Q58EE9
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Gfap antibody is available for research use only.



Western blot analysis of Gfap protein using Zebrafish Gfap antibody and 1) zebrafish head tissue lysates and 2) zebrafish embryo tissue lysates. Predicted molecular weight ~51 kDa.

Description

The Zebrafish Gfap antibody targets Gfap, a canonical intermediate filament protein expressed in radial glia, astroglial precursors, and supportive neural populations in Danio rerio. Zebrafish, also known as Danio rerio, express gfap as a major structural and functional component of the developing central nervous system. Gfap localizes to the cytoskeleton of radial glial fibers and maturing astroglia, providing mechanical stability, scaffolding for neuronal migration, and support for neurogenic niches. Because zebrafish maintain radial glia with lifelong neurogenic capacity, Gfap plays a broader developmental and regenerative role than in many mammalian systems.

Gfap belongs to the type III intermediate filament family, a group of cytoskeletal proteins that provide structural integrity

and regulate signaling within glial cells. In zebrafish embryos and larvae, gfap expression is prominent along ventricular zones, the spinal cord, optic tectum, hindbrain, and glial bridges that form migratory tracks for developing neurons. A Zebrafish Gfap antibody is suitable for research applications examining radial glial architecture, glial scaffold formation, and cellular organization within neurogenic regions.

Functionally, Gfap participates in maintaining the structural framework that supports neuroepithelial expansion, axon pathfinding, and neuronal migration. In developing zebrafish, radial glia expressing Gfap guide newborn neurons to their cortical or tectal destinations and help shape brain regionalization. Gfap also contributes to glial barrier formation, maintains blood-brain interface integrity, and participates in metabolic support roles for nearby neurons. During neural regeneration, which zebrafish perform robustly, gfap expression is rapidly upregulated in proliferative glial populations that re-enter the cell cycle and produce new neurons following injury.

Structurally, Gfap contains an alpha-helical rod domain flanked by head and tail regions that mediate filament assembly, stability, and interaction with cytoskeletal elements. These features contribute to radial glial fiber organization and mechanical resilience during brain growth and tissue remodeling. Zebrafish gfap maps to chromosome 19, where regulatory elements direct expression to ventricular zones and injury-responsive glial domains. Co-localization studies frequently detect Gfap alongside neural progenitor markers such as Sox2 or proliferation markers during regeneration, as well as alongside glutamine synthetase in differentiated glial populations.

A Zebrafish Gfap antibody is suitable for detecting Gfap in studies of neural development, radial glial dynamics, astroglial maturation, and regenerative neurogenesis in Danio rerio. Its cytoskeletal localization provides clear visualization of glial networks that scaffold the nervous system, define neurogenic niches, and coordinate neuronal positioning. Because zebrafish Gfap is dynamically regulated during injury responses, glial activation, and developmental transitions, this antibody supports investigations into glial biology, brain regeneration, neurodevelopmental pathways, and the cellular organization of the zebrafish central nervous system. This reagent is supplied for research use by NSJ Bioreagents.

Application Notes

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

Immunogen

E. coli-derived zebrafish Gfap recombinant protein (amino acids R123-P444) was used as the immunogen for the Zebrafish Gfap antibody.

Storage

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