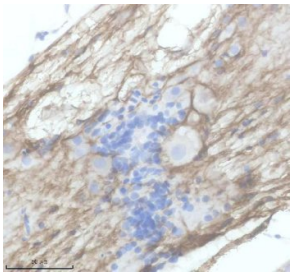
Zebrafish PDGFRA Antibody / PDGFR Alpha Antibody (RZ1404)

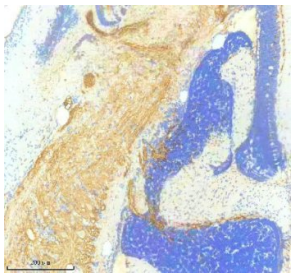
Catalog No.	Formulation	Size
RZ1404	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Lyophilized from a buffered saline solution containing 2% trehalose. Reconstitute with 0.2 mL distilled water to yield a final antibody concentration of 500 ug/mL.
UniProt	Q9DE49
Applications	Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish PDGFRA Antibody / PDGFR Alpha Antibody is available for research use only.



Zebrafish PDGFRA Antibody Spinal Cord IHC. Immunohistochemistry staining of paraffin-embedded zebrafish spinal cord tissue using Zebrafish PDGFRA Antibody / PDGFR Alpha Antibody demonstrates membranous and cytoplasmic HRP-DAB brown staining within spinal cord-associated cellular populations. The staining pattern is consistent with expression of PDGFRA, a receptor tyrosine kinase that mediates platelet-derived growth factor signaling and regulates cellular proliferation, migration, survival, and differentiation during vertebrate development. PDGFRA plays important roles in neural crest biology, mesenchymal tissue development, and organization of the developing nervous system. HIER was performed using EDTA buffer prior to staining. Tissue sections were blocked with 10% goat serum and incubated with primary antibody at 2 ug/ml overnight at 4C before detection with peroxidase-conjugated goat anti-rabbit IgG and DAB chromogen.



Zebrafish PDGFRA Antibody Brain IHC. Immunohistochemistry staining of paraffin-embedded zebrafish brain tissue using Zebrafish PDGFRA Antibody / PDGFR Alpha Antibody demonstrates widespread HRP-DAB brown staining within brain-associated cellular and stromal structures. The staining pattern is consistent with expression of PDGFRA, a receptor tyrosine kinase that mediates platelet-derived growth factor signaling and regulates cellular proliferation, migration, differentiation, and survival during vertebrate development. PDGFRA plays important roles in neural development, neural crest-derived cell biology, tissue morphogenesis, and growth factor-mediated signaling pathways that contribute to organization of the developing nervous system. HIER was performed using EDTA buffer prior to staining. Tissue sections were blocked with 10% goat serum and incubated with primary antibody at 2 ug/ml overnight at 4C before detection with peroxidase-conjugated goat anti-rabbit IgG and DAB chromogen.

Description

Zebrafish PDGFRA Antibody / PDGFR Alpha Antibody detects PDGFRA, a receptor tyrosine kinase that mediates signaling by platelet-derived growth factors and plays essential roles in embryonic development, cellular migration, tissue morphogenesis, and mesenchymal cell biology. As a cell-surface receptor involved in growth factor-dependent signaling pathways, PDGFRA regulates proliferation, survival, differentiation, and migration of multiple cell populations during vertebrate development. Zebrafish PDGFRA Antibody is widely used for studies of developmental signaling, mesenchymal tissue formation, and receptor tyrosine kinase biology.

Upon binding platelet-derived growth factor ligands, PDGFRA undergoes dimerization and activation of intracellular kinase activity, leading to stimulation of signaling pathways that regulate gene expression, cytoskeletal organization, and cellular behavior. Through these mechanisms, PDGFRA contributes to communication between developing tissues and coordinates cellular responses required for normal embryogenesis and organ formation.

In zebrafish, PDGFRA is expressed in mesenchymal, neural crest-derived, and developing stromal cell populations where it participates in craniofacial development, connective tissue formation, cardiovascular development, and tissue remodeling. The receptor has been extensively studied as a regulator of cell migration and morphogenesis during embryonic development. Because zebrafish embryos permit direct visualization of developmental processes, PDGFRA serves as a valuable marker for investigating conserved mechanisms of vertebrate tissue formation.

PDGFRA signaling plays an important role in the regulation of progenitor cell populations and contributes to developmental pathways that govern tissue patterning and cellular differentiation. Researchers frequently utilize Zebrafish PDGFRA Antibody to investigate growth factor signaling networks that influence mesenchymal development, cellular migration, and embryonic organization.

Beyond developmental biology, PDGFRA is studied in regenerative processes, wound repair, stem cell-associated signaling, and tissue remodeling. The evolutionary conservation of PDGFRA signaling across vertebrates makes zebrafish an important model for understanding receptor tyrosine kinase biology and growth factor-mediated cellular communication. Analysis of PDGFRA expression provides insight into the molecular mechanisms that regulate tissue development and maintenance.

Zebrafish PDGFRA Antibody / PDGFR Alpha Antibody is useful for researchers studying developmental biology, receptor tyrosine kinase signaling, mesenchymal development, neural crest biology, tissue morphogenesis, cellular migration, stem cell regulation, and vertebrate organogenesis. Applications may include immunohistochemistry, immunofluorescence, western blotting, and other protein expression analyses when supported by validation data.

Learn more about PDGFRA expression, platelet-derived growth factor signaling, mesenchymal development, and receptor tyrosine kinase biology on our PDGFR Alpha Antibody / Receptor Tyrosine Kinase Antibody page.

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

Application Notes

The optimal working dilution of the Zebrafish PDGFRA Antibody / PDGFR Alpha Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish PDGFR alpha/PDGFRA recombinant protein (amino acids Y93-E469) was used as the immunogen for the Zebrafish PDGFRA Antibody.

Storage

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

Alternate Names

Zebrafish PDGFRA Antibody, Zebrafish PDGFR Alpha Antibody, Zebrafish Platelet Derived Growth Factor Receptor Alpha Antibody, Zebrafish PDGF Receptor Alpha Antibody, Zebrafish Receptor Tyrosine Kinase Antibody, Zebrafish Mesenchymal Development Receptor Antibody