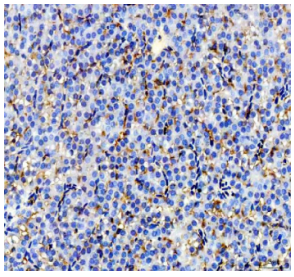
Zebrafish Igf2a Antibody / Igf2 / Insulin-like growth factor 2 (RZ1199)

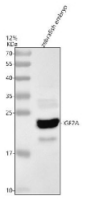
Catalog No.	Formulation	Size
RZ1199	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

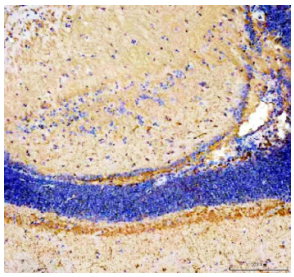
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9PUD0
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish Igf2a antibody is available for research use only.



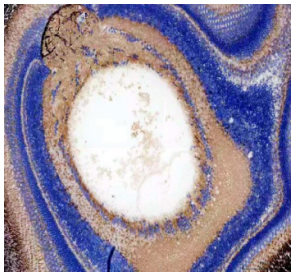
IHC staining of zebrafish Igf2a protein using Zebrafish Igf2a antibody, HRP-labeled secondary and DAB substrate. Igf2a was detected in a paraffin-embedded section of zebrafish liver tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot analysis of Igf2a protein using Zebrafish Igf2a antibody and 1) zebrafish embryo tissue lysates. Predicted molecular weight ~23 kDa.



IHC staining of zebrafish Igf2a protein using Zebrafish Igf2a antibody, HRP-labeled secondary and DAB substrate. Igf2a was detected in a paraffin-embedded section of zebrafish brain tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



IHC staining of zebrafish Igf2a protein using Zebrafish Igf2a antibody, HRP-labeled secondary and DAB substrate. Igf2a was detected in a paraffin-embedded section of zebrafish eye tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Zebrafish Igf2a antibody detects Igf2a, a growth-promoting peptide hormone that regulates embryonic growth, tissue differentiation, metabolic signaling, and organ development. In zebrafish (Danio rerio), Igf2a functions as one of the principal insulin-like growth factors that activate mitogenic and anabolic pathways through Igf receptors. Also known in the literature by the alternate names Igf2 and Insulin-like growth factor 2, Igf2a plays conserved roles across vertebrates by controlling cell proliferation, survival, and developmental timing. Because IGF-family signaling governs processes from early axis formation to metabolic regulation, Zebrafish Igf2a antibody reagents support research in developmental biology, growth control, and endocrine signaling.

During early zebrafish development, igf2a is expressed in tissues undergoing rapid growth, including the developing brain, somites, heart-forming regions, and endodermal structures. Igf2a promotes proliferation of progenitor cells, supports differentiation of muscle and skeletal tissues, and contributes to shaping the embryonic body plan. In the scientific literature, zebrafish proteins such as Igf2a are frequently described using Danio rerio naming, and terms like Danio Igf2a or Danio rerio Igf2a appear interchangeably with zebrafish terminology.

Insulin-like growth factor 2 signals through Igf1r and Igf2r pathways to activate downstream effectors including PI3K-Akt, mTOR, and MAPK cascades. These pathways regulate cell cycle progression, apoptosis resistance, nutrient utilization, and anabolic metabolism. Because these signaling networks are highly conserved, zebrafish Igf2a provides a tractable in vivo model for dissecting growth factor signaling dynamics and understanding congenital growth disorders or metabolic dysregulation.

Beyond growth regulation, Igf2a plays key roles in cardiovascular and muscular development. In the developing heart, Igf2a influences cardiomyocyte proliferation and contributes to ventricular wall formation. In skeletal muscle, Igf2a supports myoblast differentiation and sarcomere maturation. Loss or disruption of igf2a expression can impair tissue expansion, alter morphogenesis, and reduce overall embryonic growth rates.

Igf2a also participates in organ-specific development. In the liver and pancreas, Igf2a supports metabolic maturation and contributes to endocrine tissue formation. In the brain, Igf2a regulates neural progenitor proliferation and helps pattern forebrain structures. Its versatile roles make it a key ligand for studying how local and systemic growth cues coordinate vertebrate embryogenesis.

At the molecular level, Igf2a is produced as a precursor peptide containing signal and propeptide regions that are processed into a mature bioactive form. The mature hormone binds receptors with high affinity and engages adapter proteins such as IRS-family intermediates. Regulation of igf2a expression involves epigenetic mechanisms, transcriptional

control, and responsiveness to environmental factors such as nutrient availability.

Zebrafish provide unique advantages for studying Igf2a function, including transparency for imaging, rapid developmental timing, and sensitivity to metabolic and growth-related perturbations. Researchers use Igf2a to investigate growth factor signaling, regenerative responses, and developmental compensation mechanisms across tissues.

A Zebrafish Igf2a antibody is suitable for research applications such as western blotting, immunohistochemistry, and assays examining growth factor signaling, tissue development, embryonic growth control, and metabolic regulation. This antibody targets Insulin-like growth factor 2 for studies involving mitogenic pathways and vertebrate developmental physiology. NSJ Bioreagents provides the Zebrafish Igf2a antibody to support research in growth and endocrine biology.

Application Notes

Optimal dilution of the Zebrafish Igf2a antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Igf2a recombinant protein (amino acids G41-K197) was used as the immunogen for the Zebrafish Igf2a antibody.

Storage

After reconstitution, the Zebrafish Igf2a antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.