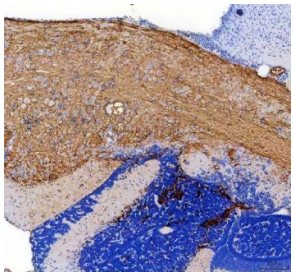
Zebrafish ACVR1L Antibody / ALK8 Antibody (RZ1360)

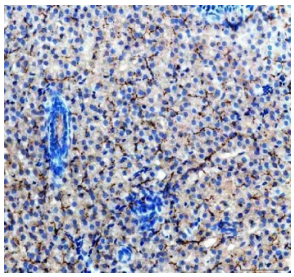
Catalog No.	Formulation	Size
RZ1360	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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	O73736
Applications	Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish ACVR1L Antibody / ALK8 Antibody is available for research use only.



Zebrafish ACVR1L / ALK8 Antibody Brain IHC. Immunohistochemistry staining of FFPE zebrafish brain tissue using Zebrafish ACVR1L Antibody demonstrates widespread cytoplasmic HRP-DAB brown staining throughout neural tissue regions, with prominent immunoreactivity observed in densely cellular brain-associated structures. The staining pattern is consistent with expression of Activin Receptor Type 1-Like (ACVR1L), also known as ALK8, a serine/threonine kinase receptor that mediates BMP and TGF-beta signaling during vertebrate development. Expression within neural tissues is consistent with the established role of ACVR1L in embryonic patterning, neural development, cellular differentiation, and regulation of developmental signaling pathways. Heat mediated antigen retrieval was performed in EDTA buffer. Primary antibody was incubated overnight at 4Â°C followed by detection using a peroxidase-conjugated goat anti-rabbit secondary antibody and DAB chromogen.



Zebrafish ACVR1L / ALK8 Antibody Liver IHC. Immunohistochemistry staining of FFPE zebrafish liver tissue using Zebrafish ACVR1L Antibody demonstrates widespread cytoplasmic HRP-DAB brown staining throughout hepatocyte populations. The staining pattern is consistent with expression of Activin Receptor Type 1-Like (ACVR1L), also known as ALK8, a transmembrane serine/threonine kinase receptor that mediates BMP and TGF-beta signaling pathways. Hepatic expression of ACVR1L is consistent with the broad involvement of BMP receptor signaling in cellular differentiation, tissue homeostasis, developmental regulation, and growth factor-mediated signaling processes. Heat mediated antigen retrieval was performed in EDTA buffer. Primary antibody was incubated overnight at 4Â°C followed by detection using a peroxidase-conjugated goat anti-rabbit secondary antibody and DAB chromogen.

Description

Zebrafish ACVR1L Antibody / ALK8 Antibody recognizes Activin Receptor Type 1-Like (ACVR1L), also known as ALK8, a transmembrane serine/threonine kinase receptor that functions within the BMP and TGF-beta signaling pathways. ACVR1L plays a critical role during vertebrate embryogenesis by transmitting extracellular developmental signals that regulate tissue specification, embryonic patterning, and cellular differentiation. Upon activation by BMP family ligands, ACVR1L initiates intracellular signaling cascades that influence gene expression programs required for normal development. The highly conserved nature of BMP receptor signaling has established zebrafish as an important model for investigating ACVR1L function and developmental regulation.

ACVR1L is particularly important during early embryonic development where BMP signaling helps establish dorsoventral patterning and guides formation of multiple tissue types. Precise regulation of ACVR1L activity is required for proper embryonic organization, morphogenesis, and organ development. Mutations or altered signaling through ACVR1L can disrupt developmental processes and lead to significant abnormalities in tissue formation. As a result, ACVR1L remains an important target in studies focused on developmental biology, embryogenesis, and signaling pathway regulation.

Beyond its role in embryonic patterning, ACVR1L contributes to regulation of cellular proliferation, differentiation, and tissue homeostasis through interactions with BMP family ligands and intracellular SMAD signaling proteins. Researchers frequently evaluate ACVR1L expression when studying developmental signaling networks, stem cell biology, regenerative processes, and tissue specification. Because BMP receptor signaling influences numerous developmental pathways, ACVR1L serves as an important marker of growth factor-mediated developmental regulation.

Zebrafish provide unique advantages for studying BMP and TGF-beta signaling because embryonic development can be observed directly in living animals. Investigators commonly utilize zebrafish models to examine morphogenesis, organogenesis, regenerative biology, and developmental toxicology. The transparency of zebrafish embryos and the conservation of BMP signaling pathways make this system particularly valuable for understanding receptor-mediated developmental regulation. Findings generated using zebrafish models frequently provide important insight into vertebrate developmental biology and disease-associated signaling mechanisms.

At NSJ Bioreagents, we provide highly validated antibodies for developmental biology, stem cell research, regenerative medicine, and zebrafish research. Zebrafish ACVR1L Antibody / ALK8 Antibody targets a key receptor within the BMP and TGF-beta signaling pathways. ACVR1L expression is widely studied in the context of embryonic patterning, developmental signaling, tissue specification, morphogenesis, and vertebrate development. Continued investigation of this important receptor is expanding our understanding of the molecular pathways that control tissue formation and developmental organization.

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 ACVR1L Antibody / ALK8 Antibody should be determined empirically by the

investigator.

Immunogen

An E.coli-derived Zebrafish ACVR1L recombinant protein (amino acids M1-C506) was used as the immunogen for the Zebrafish ACVR1L / ALK8 Antibody.

Storage

After reconstitution, the Zebrafish ACVR1L / ALK8 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 ALK8 Antibody, Zebrafish Activin Receptor Type 1-Like Antibody, Zebrafish BMP Receptor Antibody, Zebrafish TGF-Beta Receptor Kinase Antibody, Zebrafish Developmental Signaling Receptor Antibody, Zebrafish Serine/Threonine Kinase Receptor Antibody

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