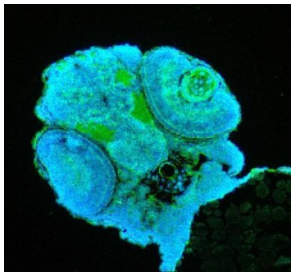
Zebrafish JAG1 Antibody / Jagged 1b Antibody (RZ1400)

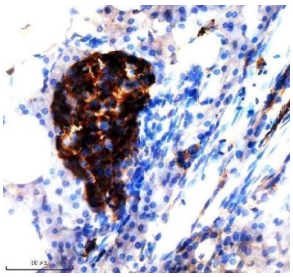
Catalog No.	Formulation	Size
RZ1400	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

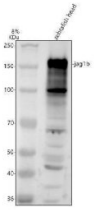
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Lyophilized from a buffered saline solution containing 2% trehalose. Reconstitute with 0.2 mL distilled water to yield a final antibody concentration of 500 ug/mL.
UniProt	Q90Y54
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	This Zebrafish JAG1 Antibody / Jagged 1b Antibody is available for research use only.



Zebrafish JAG1 Antibody IF. Immunofluorescent staining of paraffin-embedded zebrafish embryo tissue using Zebrafish JAG1 Antibody / Jagged 1b Antibody demonstrates green fluorescence within developing embryonic structures, including regions associated with organogenesis and tissue patterning. The staining pattern is consistent with expression of JAG1B, a transmembrane Notch ligand that mediates cell-cell communication during vertebrate development. JAG1B plays important roles in cell fate determination, differentiation, tissue morphogenesis, and regulation of Notch signaling pathways. HIER was performed using EDTA buffer prior to staining. Tissue sections were blocked with 10% goat serum and incubated with primary antibody at 5 ug/ml overnight at 4C. DyLight-488-conjugated goat anti-rabbit IgG was used as the secondary antibody (green), and nuclei were counterstained with DAPI (blue). The image supports detection of JAG1B expression in developing zebrafish embryonic tissues by immunofluorescence.



Zebrafish JAG1 Antibody Pancreas IHC. Immunohistochemistry staining of paraffin-embedded zebrafish pancreas tissue using Zebrafish JAG1 Antibody / Jagged 1b Antibody demonstrates strong HRP-DAB brown staining within a discrete cluster of pancreatic cells. The staining pattern is consistent with expression of JAG1B, a transmembrane Notch ligand that regulates cell-cell communication, cellular differentiation, and tissue patterning during vertebrate development. JAG1B-mediated Notch signaling plays important roles in pancreatic development, maintenance of progenitor cell populations, and regulation of cell fate decisions within developing tissues. HIER was performed using EDTA buffer. Tissue sections were blocked with 10% goat serum and incubated with primary antibody at 2 ug/ml overnight at 4C prior to detection with peroxidase-conjugated goat anti-rabbit IgG and DAB chromogen.



Zebrafish JAG1 Antibody WB. Western blot analysis of zebrafish head tissue lysate using Zebrafish JAG1 Antibody / Jagged 1b Antibody demonstrates a prominent immunoreactive band at approximately 150-155 kDa, consistent with expression of JAG1B. Jagged 1b is a transmembrane Notch ligand that mediates cell-cell communication required for cell fate determination, tissue patterning, differentiation, and organ development during vertebrate embryogenesis. The observed molecular weight exceeds the predicted size of approximately 133 kDa, which is consistent with the extensive glycosylation known to occur within Jagged family proteins. Additional lower molecular weight bands are present and may represent processed forms, degradation products, or nonspecific reactivity. Thirty micrograms of protein were loaded under reducing conditions. Predicted molecular weight: approximately 133 kDa.

Description

Zebrafish JAG1 Antibody / Jagged 1b Antibody detects JAG1B, a zebrafish ortholog of human JAG1 and a member of the Jagged family of Notch receptor ligands. JAG1B functions as a key regulator of Notch signaling, a highly conserved cell-cell communication pathway that controls cell fate determination, differentiation, proliferation, and tissue patterning during vertebrate development. Because Notch signaling influences the formation of numerous organs and tissues, JAG1B is widely studied in zebrafish models of embryogenesis, organogenesis, and developmental signaling. Zebrafish JAG1 Antibody is useful for investigating Notch pathway activity and developmental processes in the zebrafish model system.

JAG1B is a transmembrane ligand that activates Notch receptors on neighboring cells through direct cell-cell contact. Binding of Jagged ligands to Notch receptors initiates signaling cascades that regulate transcriptional programs controlling cellular specification and developmental timing. Through these interactions, JAG1B contributes to the establishment of tissue boundaries, maintenance of progenitor cell populations, and coordination of developmental processes throughout the embryo.

In zebrafish, JAG1B has been implicated in the development of the nervous system, cardiovascular system, craniofacial structures, sensory organs, and other embryonic tissues. The protein participates in signaling networks that guide tissue morphogenesis and cellular differentiation, making it a valuable marker for studies of vertebrate developmental biology. Because zebrafish embryos develop externally and are readily accessible for visualization, JAG1B is frequently examined in investigations of Notch pathway regulation and tissue patterning.

The Notch signaling pathway is essential for balancing cellular proliferation and differentiation during development and tissue maintenance. JAG1B-mediated signaling helps ensure proper coordination of these processes by regulating communication between adjacent cells. Disruption of Jagged-Notch interactions can alter tissue architecture and developmental outcomes, highlighting the importance of JAG1B in maintaining normal developmental programs. Researchers frequently employ Zebrafish JAG1 Antibody to evaluate these conserved signaling mechanisms.

Beyond developmental biology, JAG1B is frequently investigated in studies of stem cell regulation, regenerative biology, and signaling pathway interactions. Zebrafish possess remarkable regenerative capacity, and Notch pathway components

such as JAG1B are commonly evaluated in models of tissue repair and regeneration. These studies provide insight into conserved molecular mechanisms that regulate cellular plasticity and tissue remodeling in vertebrates.

Zebrafish JAG1 Antibody / Jagged 1b Antibody is useful for researchers studying Notch signaling, embryonic development, cell fate determination, tissue patterning, regenerative biology, stem cell regulation, and vertebrate organogenesis. Applications may include immunohistochemistry, immunofluorescence, western blotting, and other protein expression analyses when supported by validation data. As a critical ligand within the Notch signaling pathway, JAG1B remains an important target for understanding the molecular mechanisms that govern developmental and regenerative processes.

Learn more about JAG1 expression, Notch pathway activation, cell fate determination, and developmental signaling on our Jagged 1 Antibody / Notch Signaling Ligand 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 JAG1 Antibody / Jagged 1b Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish JAG1B recombinant protein (amino acids Q853-V1213) was used as the immunogen for the Zebrafish JAG1B Antibody.

Storage

After reconstitution, the Zebrafish JAG1B 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 JAG1B Antibody, Zebrafish JAG1 Antibody, Zebrafish Jagged 1b Antibody, Zebrafish Jagged 1 Antibody, Zebrafish Notch Ligand Antibody, Zebrafish Notch Signaling Protein Antibody

Copyright © NSJ Bioreagents. All rights reserved.