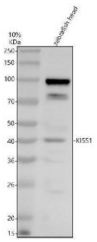
Zebrafish LEFTY2 Antibody / Left-Right Determination Factor 2 Antibody (RZ1476)

Catalog No.	Formulation	Size
RZ1476	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	Q9W6I7
Applications	Western blot: 0.5-1ug/ml
Limitations	This Zebrafish LEFTY2 Antibody / Left-Right Determination Factor 2 Antibody is available for research use only.



Zebrafish LEFTY2 Antibody / Left-Right Determination Factor 2 Antibody Zebrafish Head WB. Western blot analysis of zebrafish head tissue lysate using Zebrafish LEFTY2 Antibody / LFT2 Antibody. A distinct immunoreactive band is detected at approximately 41 kDa, consistent with the predicted molecular weight of LEFTY2. The observed molecular weight matches the expected size of approximately 41 kDa, supporting specific detection of the endogenous developmental signaling protein. Proteins were separated under reducing conditions, transferred to a nitrocellulose membrane, and detected following incubation with the primary antibody (0.5 ug/ml) and an HRP-conjugated goat anti-rabbit secondary antibody using ECL detection.

Description

Zebrafish LEFTY2 Antibody / Left-Right Determination Factor 2 Antibody recognizes zebrafish LFT2, the functional ortholog of human LEFTY2, a secreted signaling protein belonging to the transforming growth factor beta superfamily that plays a central role in establishing left-right body asymmetry during vertebrate embryogenesis. LEFTY2/LFT2 functions as an antagonist of Nodal signaling, restricting pathway activity to ensure correct left-right patterning and normal organ positioning. Through precise spatial and temporal regulation of developmental signaling, LEFTY2/LFT2 contributes to formation of the heart, gut, and additional visceral organs. Zebrafish LEFTY2 Antibody / Left-Right Determination Factor 2

Antibody is therefore well suited for studies of embryonic development, axis formation, and developmental signaling.

During zebrafish embryogenesis, LEFTY2 is expressed within the lateral plate mesoderm and other tissues involved in left-right axis determination. By limiting the range and duration of Nodal signaling, LEFTY2 establishes feedback regulation that maintains proper developmental boundaries and prevents ectopic pathway activation. This tightly controlled signaling network is essential for asymmetric organ morphogenesis, cardiac looping, and coordinated development of visceral structures. Disruption of LEFTY2 expression or function can lead to laterality defects and abnormal organ positioning, highlighting its importance in vertebrate development.

Beyond embryonic patterning, LEFTY2 has been implicated in stem cell biology, tissue differentiation, reproductive biology, and tumor progression. Altered LEFTY2 signaling has been associated with congenital laterality disorders and has also been investigated in cancer, where transforming growth factor beta pathway regulation influences cellular proliferation, migration, and differentiation. Because LEFTY2-mediated signaling is highly conserved among vertebrates, zebrafish provides an excellent model for studying developmental mechanisms relevant to human biology and disease.

Zebrafish LEFTY2 Antibody / Left-Right Determination Factor 2 Antibody is suitable for immunohistochemistry, immunofluorescence, western blotting, and related immunodetection applications requiring reliable detection of LEFTY2 expression and localization. Researchers commonly use this antibody to investigate left-right axis formation, Nodal signaling, embryonic development, and transforming growth factor beta pathway regulation. By supporting studies of one of the key regulators of vertebrate body patterning, Zebrafish LEFTY2 Antibody / Left-Right Determination Factor 2 Antibody provides a dependable reagent for developmental biology and translational research.

Explore additional antibodies involved in embryonic development, body patterning, and organogenesis on our Developmental Biology Antibodies page.

Application Notes

The optimal working dilution of the Zebrafish LEFTY2 Antibody / Left-Right Determination Factor 2 Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish LFT2 recombinant protein (amino acids F20-Q256) was used as the immunogen for the Zebrafish LFT2 Antibody.

Storage

After reconstitution, the Zebrafish LFT2 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 LEFTY2 antibody, Zebrafish Left-Right Determination Factor 2 antibody, Zebrafish Lefty 2 antibody, Zebrafish LFT2 antibody, Zebrafish Lefty A antibody, Zebrafish TGF Beta Family Protein antibody

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