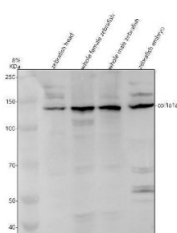


Zebrafish Collagen I Antibody / COL1A1A Antibody (RZ1460)

Catalog No.	Formulation	Size
RZ1460	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	Q6U1J5
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Collagen I Antibody / COL1A1A Antibody is available for research use only.



Zebrafish Collagen I Antibody WB. Western blot analysis of COL1A1A expression was performed using anti-COL1A1A / Collagen I antibody. Electrophoresis was carried out on an 8% SDS-PAGE gel under reducing conditions. Lane 1: zebrafish head tissue lysate. Lane 2: whole female zebrafish tissue lysate. Lane 3: whole male zebrafish tissue lysate. Lane 4: zebrafish embryo tissue lysate. COL1A1A, also known as Collagen Type I Alpha 1a, is the major fibrillar collagen of the extracellular matrix and provides structural integrity to bone, skin, and connective tissues. A specific immunoreactive band is detected at approximately 137 kDa in all four samples, corresponding to the expected molecular weight of COL1A1A. Similar expression in head, whole-body, and embryo lysates is consistent with the widespread distribution of type I collagen and its essential role in skeletal development and extracellular matrix organization. These results support the utility of Zebrafish Collagen I Antibody for studies of connective tissue biology, osteogenesis, and vertebrate development.

Description

Zebrafish Collagen I Antibody / COL1A1A Antibody recognizes collagen alpha-1(I) chain encoded by the *col1a1a* gene, one of the principal structural proteins of the extracellular matrix. Type I collagen is the most abundant collagen in vertebrates and provides tensile strength to connective tissues including bone, skin, tendon, and scales. Because the composition and organization of collagen fibers are highly conserved among vertebrates, zebrafish have emerged as

valuable models for investigating extracellular matrix biology and skeletal development. Zebrafish Collagen I Antibody / COL1A1A Antibody enables characterization of collagen deposition and tissue architecture throughout development and adulthood.

Zebrafish Collagen I Antibody / COL1A1A Antibody is particularly useful for studying osteogenesis, connective tissue formation, and wound repair. COL1A1A is expressed in osteoblasts, fibroblasts, and other mesenchymal cell populations that synthesize extracellular matrix proteins. During embryonic development, collagen I contributes to the formation of skeletal structures and provides mechanical support required for tissue integrity. Remodeling of collagen networks is also essential for regeneration and maintenance of connective tissues. The optical transparency and genetic accessibility of zebrafish facilitate analysis of collagen deposition and extracellular matrix dynamics in vivo.

Mutations affecting collagen I are associated with connective tissue disorders and skeletal abnormalities, including osteogenesis imperfecta and impaired bone mineralization. Zebrafish models have been extensively used to investigate these disorders because they faithfully recapitulate many features of human collagen-related diseases. In addition to skeletal development, collagen I plays important roles in fibrosis, wound healing, and tissue regeneration. Changes in collagen organization influence cell migration, signaling pathways, and extracellular matrix remodeling. Zebrafish Collagen I Antibody / COL1A1A Antibody provides a useful tool for studying these conserved biological processes.

Zebrafish Collagen I Antibody / COL1A1A Antibody is valuable for investigations of extracellular matrix biology, osteogenesis, connective tissue development, fibrosis, and vertebrate regeneration. It supports studies of skeletal formation, tissue remodeling, and collagen-related diseases. The conserved expression and function of type I collagen make Zebrafish Collagen I Antibody / COL1A1A Antibody an important reagent for developmental and translational research.

Explore our [Collagen I Antibody / Extracellular Matrix Protein Antibody](#) page to learn more about type I collagen and its roles in connective tissue formation, extracellular matrix organization, and tissue remodeling.

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 Collagen I Antibody / COL1A1A Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish COL1A1A recombinant protein (amino acids F1180-M1341) was used as the immunogen for the Zebrafish Collagen I Antibody.

Storage

After reconstitution, the Zebrafish Collagen I 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 Collagen I antibody, Zebrafish COL1A1A antibody, Zebrafish Type I Collagen antibody, Zebrafish Collagen Alpha-1(I) Chain antibody, Zebrafish Fibrillar Collagen antibody, Zebrafish Extracellular Matrix Protein antibody

