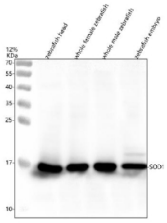
Zebrafish Sod1 Antibody / Superoxide dismutase 1 (RZ1311)

Catalog No.	Formulation	Size
RZ1311	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	O73872
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Sod1 antibody is available for research use only.



Western blot analysis of Sod1 protein using Zebrafish Sod1 antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~16 kDa.

Description

Zebrafish Sod1, also known as superoxide dismutase 1, is a critical antioxidant enzyme that catalyzes the dismutation of superoxide radicals into hydrogen peroxide and molecular oxygen. This enzymatic activity is essential for protecting cells from oxidative damage caused by reactive oxygen species, which are byproducts of normal cellular metabolism and environmental stress. Sod1 plays a vital role in maintaining redox balance, protecting cellular structures, and supporting overall cellular homeostasis.

Zebrafish Sod1 is an ortholog of the human SOD1 protein, sharing high sequence and functional conservation. Mutations in human SOD1 are well known for their link to amyotrophic lateral sclerosis (ALS), and zebrafish models expressing

mutant Sod1 have been used extensively to study the mechanisms of neurodegeneration and oxidative stress. The conserved enzymatic function of Sod1 in zebrafish makes it a powerful model for investigating oxidative damage, neuronal health, and stress response pathways.

There are no confirmed isoforms of zebrafish Sod1. The protein is expressed broadly in various tissues, with higher expression in metabolically active organs such as the brain, liver, and muscles where reactive oxygen species production is elevated. Its activity is tightly regulated, as both deficient and excessive reactive oxygen species can lead to cellular dysfunction.

Antibodies targeting zebrafish Sod1 protein are important tools for studying oxidative stress pathways, mitochondrial function, and the effects of environmental or chemical stressors on cellular health. These antibodies are commonly used in applications such as western blot, immunohistochemistry, immunofluorescence, and ELISA to analyze Sod1 expression and regulation in zebrafish tissues.

Application Notes

Optimal dilution of the Zebrafish Sod1 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Sod1 recombinant protein (amino acids M1-Q154) was used as the immunogen for the Zebrafish Sod1 antibody.

Storage

After reconstitution, the Zebrafish Sod1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.