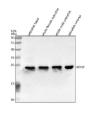


Zebrafish Sod2 Antibody / Superoxide dismutase 2 (RZ1312)

Catalog No.	Formulation	Size
RZ1312	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Zebrafish
Predicted Reactivity	Human
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q6P980
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish Sod2 antibody is available for research use only.



Western blot analysis of Sod2 protein using Zebrafish Sod2 antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~25 kDa.

Description

Zebrafish Sod2, also known as superoxide dismutase 2, is a manganese containing antioxidant enzyme located in the mitochondrial matrix. It catalyzes the dismutation of superoxide radicals into hydrogen peroxide and oxygen, which is a critical step in defending cells against oxidative stress generated during mitochondrial respiration. Sod2 is essential for maintaining mitochondrial integrity, reducing oxidative damage to proteins, lipids, and DNA, and ensuring proper cellular metabolism and survival.

Zebrafish Sod2 is an ortholog of the human SOD2 protein, with strong sequence and functional conservation. As in

humans, Sod2 in zebrafish plays a vital role in protecting highly metabolic tissues such as the brain, heart, and muscles from oxidative damage. Mutations or reduced activity of Sod2 can lead to mitochondrial dysfunction and oxidative stress, contributing to developmental abnormalities and degenerative diseases.

Currently, there are no confirmed isoforms of zebrafish Sod2. It is broadly expressed across tissues but is particularly abundant in cells with high energy demands. Zebrafish models deficient in Sod2 have been used to investigate the consequences of oxidative imbalance and to explore therapeutic approaches aimed at reducing mitochondrial stress.

Antibodies targeting zebrafish Sod2 protein are important tools for studying mitochondrial antioxidant defense systems, oxidative signaling pathways, and stress responses. These antibodies can be utilized in western blot, immunohistochemistry, immunofluorescence, and ELISA to monitor Sod2 levels and localization in zebrafish tissues.

Application Notes

Optimal dilution of the Zebrafish Sod2 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Sod2 recombinant protein (amino acids M1-K224) was used as the immunogen for the Zebrafish Sod2 antibody.

Storage

After reconstitution, the Zebrafish Sod2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.