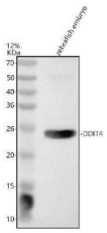
Zebrafish DDIT4 Antibody / DNA Damage Inducible Transcript 4 Antibody (RZ1462)

Catalog No.	Formulation	Size
RZ1462	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	Q7T346
Applications	Western blot: 0.5-1ug/ml
Limitations	This Zebrafish DDIT4 Antibody / DNA Damage Inducible Transcript 4 Antibody is available for research use only.



Zebrafish DDIT4 Antibody WB. Western blot analysis of DDIT4 using anti-DDIT4 antibody. Electrophoresis was performed on a 12% SDS-PAGE gel for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: zebrafish embryo tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-DDIT4 antigen antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus WB. Western blotting Substrate with Tanon 5200 system. A specific band was detected for DDIT4 at approximately 24 kDa. The expected band size for DDIT4 is at 24 kDa.

Description

Zebrafish DDIT4 Antibody / DNA Damage Inducible Transcript 4 Antibody recognizes DDIT4, also known as REDD1 (Regulated in Development and DNA Damage Responses 1), a stress-responsive protein that functions as a key regulator of cellular metabolism and survival. DDIT4 is rapidly induced by hypoxia, DNA damage, oxidative stress,

nutrient deprivation, and other environmental challenges. One of its primary functions is suppression of mTOR signaling, enabling cells to conserve energy and adapt to adverse conditions. Because DDIT4-mediated stress responses are highly conserved among vertebrates, zebrafish provide an excellent model for studying mechanisms that regulate cellular adaptation and metabolic homeostasis.

Zebrafish DDIT4 Antibody / DNA Damage Inducible Transcript 4 Antibody is useful for investigating stress signaling pathways during embryonic development and tissue maintenance. DDIT4 expression is tightly regulated and typically increases in response to cellular stressors that disrupt energy balance or oxygen availability. Through inhibition of mTOR activity, DDIT4 influences protein synthesis, autophagy, cell growth, and metabolic adaptation. These functions help maintain cellular viability under challenging conditions and contribute to developmental processes requiring precise control of growth and differentiation.

DDIT4 has been implicated in a variety of biological and pathological processes including hypoxia responses, cancer progression, neurodegeneration, inflammation, and metabolic disease. Altered DDIT4 expression can influence cellular sensitivity to stress, therapeutic response, and tissue remodeling. Zebrafish models have been used to investigate the role of stress-regulated signaling pathways in development, regeneration, and disease. Because DDIT4 serves as a critical link between environmental stress signals and mTOR-dependent cellular responses, it remains an important target in studies of growth regulation and adaptive physiology.

Zebrafish DDIT4 Antibody / DNA Damage Inducible Transcript 4 Antibody is valuable for studies of hypoxia signaling, mTOR regulation, oxidative stress, metabolism, and vertebrate development. It supports investigations of cellular adaptation, autophagy, growth control, and mechanisms that enable tissues to respond to environmental challenges. The conserved role of DDIT4 in stress-responsive signaling makes Zebrafish DDIT4 Antibody / DNA Damage Inducible Transcript 4 Antibody an important reagent for developmental and translational research.

Explore our REDD-1 Antibody / mTOR Signaling Regulator Antibody page for additional information on this key mediator of cellular stress responses, hypoxia signaling, and mTOR pathway regulation.

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 DDIT4 Antibody / DNA Damage Inducible Transcript 4 Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish DDIT4 recombinant protein (amino acids M1-C220) was used as the immunogen for the Zebrafish DDIT4 Antibody.

Storage

After reconstitution, the Zebrafish DDIT4 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 DDIT4 antibody, Zebrafish DNA Damage Inducible Transcript 4 antibody, Zebrafish REDD1 antibody, Zebrafish RTP801 antibody, Zebrafish Stress Response Protein antibody, Zebrafish mTOR Regulatory Protein antibody

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