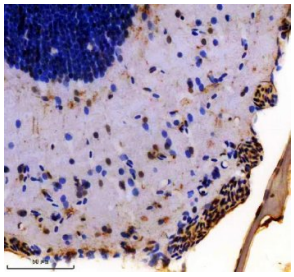
Zebrafish VHL Antibody / Von Hippel-Lindau Protein Antibody (RZ1428)

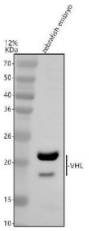
Catalog No.	Formulation	Size
RZ1428	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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	A1L296
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish VHL Antibody / Von Hippel-Lindau Protein Antibody is available for research use only.



Zebrafish VHL Antibody Brain IHC. Immunohistochemistry staining of paraffin-embedded zebrafish brain tissue using VHL antibody demonstrates distinct staining within neural tissue compartments and cells lining peripheral brain structures, consistent with expression of Von Hippel-Lindau protein (VHL). VHL is a key regulator of hypoxia-responsive signaling pathways that controls the stability of hypoxia-inducible factor (HIF) proteins and helps coordinate cellular responses to oxygen availability. The observed staining pattern is consistent with the established role of VHL in oxygen sensing, developmental regulation, and maintenance of cellular homeostasis within vertebrate tissues. Heat-mediated antigen retrieval was performed in EDTA buffer. Tissue sections were stained with 2 ug/ml primary antibody and visualized using DAB chromogen.



Zebrafish VHL Antibody WB. Western blot analysis of VHL using anti-VHL antibody demonstrates a distinct immunoreactive band at approximately 18-24 kDa in zebrafish embryo lysate, consistent with the expected molecular weight range of Von Hippel-Lindau protein (VHL). VHL is a conserved regulator of hypoxia-responsive signaling pathways that controls the stability of hypoxia-inducible factor (HIF) proteins and coordinates cellular adaptation to oxygen availability. The observed expression in embryonic tissue is consistent with the important role of VHL in developmental regulation, vascular formation, oxygen sensing, and maintenance of cellular homeostasis during vertebrate development. Western blot was performed using 0.5 ug/ml primary antibody. Predicted molecular weight: ~18 kDa.

Description

Zebrafish VHL Antibody / Von Hippel-Lindau Protein Antibody is designed for the detection and study of VHL (Von Hippel-Lindau protein), a highly conserved regulator of cellular oxygen-sensing pathways and hypoxia-responsive signaling networks. VHL functions as a component of an E3 ubiquitin ligase complex that targets hypoxia-inducible factor (HIF) proteins for degradation under normal oxygen conditions. Through this activity, VHL serves as a central regulator of cellular adaptation to changes in oxygen availability and environmental stress.

Von Hippel-Lindau protein plays a critical role in maintaining oxygen homeostasis by controlling the stability of HIF transcription factors. Under normoxic conditions, VHL-mediated degradation of HIF proteins prevents activation of hypoxia-responsive gene expression programs. When oxygen levels decrease, HIF proteins accumulate and activate pathways involved in angiogenesis, metabolism, erythropoiesis, and cellular survival. This tightly regulated system allows cells and tissues to respond appropriately to fluctuating oxygen conditions.

Zebrafish have become an important vertebrate model for investigating hypoxia signaling, vascular development, and oxygen-dependent regulatory mechanisms. VHL expression and function are closely linked to developmental pathways that govern blood vessel formation, tissue growth, metabolic adaptation, and embryonic patterning. Studies utilizing zebrafish models have provided valuable insight into how oxygen-sensing pathways influence vertebrate development and physiologic adaptation throughout the life cycle.

Beyond developmental biology, VHL remains an important target in research involving hypoxia responses, angiogenesis, cellular metabolism, and environmental adaptation. Because VHL regulates a highly conserved signaling pathway that coordinates cellular responses to oxygen availability, it is widely studied in investigations of vascular biology, metabolic regulation, and mechanisms that maintain tissue homeostasis under changing physiologic conditions.

Zebrafish VHL Antibody is useful for investigating hypoxia signaling, HIF regulation, oxygen sensing pathways, and developmental biology processes. Researchers utilize VHL expression studies to better understand molecular mechanisms governing vascular development, metabolic adaptation, oxygen homeostasis, and vertebrate development.

For additional information on VHL function, hypoxia signaling pathways, and oxygen-sensing mechanisms, visit our VHL Antibody / Tumor Suppressor Protein Antibody page.

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 VHL Antibody / Von Hippel-Lindau Protein Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish Von Hippel-Lindau Protein recombinant protein (amino acids M1-H175) was used as the immunogen for the Zebrafish VHL Antibody.

Storage

After reconstitution, the Zebrafish VHL 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 VHL Antibody, Zebrafish Von Hippel-Lindau Protein Antibody, Zebrafish VHL Tumor Suppressor Antibody, Zebrafish HIF Regulator Antibody, Zebrafish Oxygen Sensing Protein Antibody, Zebrafish Hypoxia Response Protein Antibody, Zebrafish E3 Ubiquitin Ligase Complex Protein Antibody

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