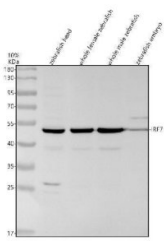
Zebrafish IRF7 Antibody / Interferon Regulatory Factor 7 Antibody (RZ1353)

Catalog No.	Formulation	Size
RZ1353	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	F1QNG2
Applications	Western blot: 0.5-1ug/ml
Limitations	This Zebrafish IRF7 Antibody / Interferon Regulatory Factor 7 Antibody is available for research use only.



Zebrafish IRF7 / Interferon Regulatory Factor 7 Antibody Antiviral Response WB. Western blot analysis of zebrafish head tissue, whole female zebrafish, whole male zebrafish, and embryo lysates using Zebrafish IRF7 Antibody demonstrates a prominent immunoreactive band at approximately 48 kDa, consistent with the predicted molecular weight of Interferon Regulatory Factor 7 (IRF7). IRF7 is a transcription factor that serves as a master regulator of type I interferon production and antiviral immune responses, coordinating expression of genes involved in innate immunity and host defense. The observed band is detected across multiple zebrafish tissue sources and developmental stages, consistent with the fundamental role of IRF7 in immune signaling pathways. A faint lower molecular weight immunoreactive band is also observed in the head tissue lysate. Electrophoresis was performed on a 10% SDS-PAGE gel under reducing conditions followed by transfer to a nitrocellulose membrane. Signal was detected using an HRP-conjugated secondary antibody and enhanced chemiluminescent substrate.

Description

Zebrafish IRF7 Antibody / Interferon Regulatory Factor 7 Antibody recognizes Interferon Regulatory Factor 7 (IRF7), a transcription factor that serves as a central regulator of antiviral immune responses and type I interferon production. IRF7 functions downstream of pattern recognition receptor signaling pathways that detect viral infection and other pathogen-

associated molecular patterns. Following activation, IRF7 undergoes phosphorylation and nuclear translocation, where it stimulates expression of interferons and interferon-stimulated genes that establish an antiviral cellular state. The highly conserved nature of innate immune signaling has made zebrafish an important vertebrate model for investigating IRF7 function in host defense and immune regulation.

IRF7 is widely regarded as a master regulator of type I interferon responses and plays a critical role in coordinating antiviral immunity. In zebrafish, IRF7 contributes to regulation of pathogen recognition pathways, innate immune activation, inflammatory signaling, and host-pathogen interactions. Activation of IRF7-dependent transcriptional programs promotes expression of genes that help limit pathogen replication and coordinate communication between immune cells. Consequently, IRF7 expression is frequently examined in studies investigating viral infection, immune responses, vaccine biology, and disease resistance mechanisms.

Beyond antiviral defense, IRF7 participates in broader immune regulatory networks that influence cytokine production, inflammatory responses, and cellular adaptation to stress. Proper regulation of IRF7 activity is essential for balancing effective host defense with controlled immune activation. Dysregulation of IRF7-dependent signaling pathways has been associated with altered susceptibility to infection, excessive inflammatory responses, and immune dysfunction across vertebrate species. As a result, IRF7 remains an important target in studies focused on innate immunity, infectious disease, and inflammatory signaling.

Zebrafish provide unique advantages for studying immune system biology because immune responses can be visualized in vivo and many innate immune pathways are highly conserved with mammals. Researchers frequently evaluate IRF7 expression during investigations of viral infection, microbial challenge, environmental stress, toxicology, and developmental immunology. Because type I interferon signaling represents a fundamental component of vertebrate host defense, IRF7 serves as a valuable marker for monitoring activation of antiviral pathways and innate immune responses.

At NSJ Bioreagents, we provide highly validated antibodies for immunology, infectious disease research, developmental biology, and zebrafish studies. Zebrafish IRF7 Antibody / Interferon Regulatory Factor 7 Antibody targets a key transcription factor involved in antiviral immunity and interferon signaling. IRF7 expression is widely studied in the context of host defense, innate immune activation, viral infection, inflammatory signaling, and immune system development. Continued investigation of this important transcription factor is expanding our understanding of the molecular mechanisms that govern antiviral responses and vertebrate immune regulation.

Explore our IRF7 Antibody / Antiviral Response Protein Antibody page for additional validation data and applications involving innate immune and interferon signaling pathways.

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 IRF7 Antibody / Interferon Regulatory Factor 7 Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish IRF7 recombinant protein (amino acids M1-S394) was used as the immunogen for the Zebrafish IRF7 Antibody.

Storage

After reconstitution, the Zebrafish IRF7 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 Interferon Regulatory Factor 7 Antibody, Zebrafish IRF-7 Antibody, Zebrafish Antiviral Response Transcription

Factor Antibody, Zebrafish Innate Immune Signaling Antibody, Zebrafish Type I Interferon Regulator Antibody, Zebrafish Immune Response Transcription Factor Antibody

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