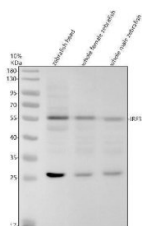


Zebrafish IRF3 Antibody / Interferon Regulatory Factor 3 Antibody (RZ1337)

Catalog No.	Formulation	Size
RZ1337	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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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	A0A8M6Z9B8
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish IRF3 Antibody / Interferon Regulatory Factor 3 Antibody is available for research use only.



Zebrafish IRF3 / Interferon Regulatory Factor 3 Antibody Innate Immunity WB. Western blot analysis of zebrafish head tissue, whole female zebrafish, and whole male zebrafish lysates using Zebrafish IRF3 Antibody demonstrates a prominent immunoreactive band at approximately 50-55 kDa, consistent with detection of Interferon Regulatory Factor 3 (IRF3). The observed band migrates slightly above the predicted molecular weight of IRF3 (~48 kDa), which may reflect phosphorylation or other post-translational modification associated with IRF3 activation and regulation. Additional lower molecular weight immunoreactive bands are observed in each lane and may represent IRF3-related fragments or non-specific reactivity. IRF3 is a transcription factor involved in interferon signaling, innate immune activation, and antiviral response pathways. 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 IRF3 Antibody / Interferon Regulatory Factor 3 Antibody recognizes Interferon Regulatory Factor 3 (IRF3), a transcription factor that serves as a central regulator of innate immune signaling and antiviral defense pathways. IRF3 functions downstream of pattern recognition receptors that detect viral nucleic acids and other pathogen-associated

molecular patterns, where it coordinates the transcriptional activation of interferons and interferon-stimulated genes. Following activation by upstream kinases, IRF3 undergoes phosphorylation, dimerization, and nuclear translocation, leading to induction of gene expression programs that help establish an antiviral cellular state. The highly conserved nature of innate immune signaling pathways has made zebrafish an important vertebrate model for investigating IRF3 function in host defense and immune regulation.

Interferon-mediated signaling represents one of the earliest protective responses mounted against viral infection. In zebrafish, IRF3 contributes to regulation of antiviral immunity, inflammatory responses, pathogen recognition pathways, and innate immune system development. Activation of IRF3 stimulates production of type I interferons and numerous downstream effector molecules that limit pathogen replication and promote immune communication. Consequently, IRF3 expression and activity are frequently examined in studies investigating viral infection, immune signaling, inflammation, and host-pathogen interactions.

Beyond its role in antiviral defense, IRF3 participates in broader cellular stress response pathways that influence apoptosis, cytokine production, and regulation of inflammatory signaling networks. Dysregulation of IRF3 activity has been associated with altered immune responses, chronic inflammation, infectious disease susceptibility, and immune-mediated pathology across vertebrate species. As a result, IRF3 remains an important target in studies focused on innate immunity, inflammatory regulation, and disease-associated signaling mechanisms.

Zebrafish provide unique advantages for examining immune signaling because of their optical transparency, genetic tractability, and suitability for live imaging studies. Researchers frequently monitor IRF3 expression during investigations of infection, vaccine responses, inflammatory signaling, toxicology, and immune system development. Because many components of the interferon pathway are highly conserved between zebrafish and mammals, findings generated using zebrafish models often provide valuable insight into vertebrate immune biology and antiviral defense mechanisms.

At NSJ Bioreagents, we provide highly validated antibodies for immunology, infectious disease research, developmental biology, and zebrafish studies. Zebrafish IRF3 Antibody / Interferon Regulatory Factor 3 Antibody targets a key transcriptional regulator of innate immune and antiviral signaling pathways. IRF3 expression is widely studied in the context of interferon responses, host defense, inflammation, pathogen recognition, and immune system development. Continued investigation of this important transcription factor is expanding our understanding of the molecular mechanisms that govern antiviral immunity and vertebrate immune regulation.

For broader characterization of IRF3-associated innate immune signaling and interferon regulatory pathways, see our [IRF3 Antibody / Innate Immune Signaling Antibody](#) page featuring clone PCRP-IRF3-6C8 with WB, IF, FACS, and HuProt(TM) microarray specificity validation data.

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 IRF3 Antibody / Interferon Regulatory Factor 3 Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish IRF3 recombinant protein (amino acids S92-L312) was used as the immunogen for the Zebrafish IRF3 Antibody.

Storage

After reconstitution, the Zebrafish IRF3 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 3 Antibody, Zebrafish IRF-3 Antibody, Zebrafish Antiviral Response Protein Antibody, Zebrafish Innate Immune Signaling Antibody, Zebrafish Interferon Signaling Factor Antibody, Zebrafish Transcription Factor IRF3 Antibody