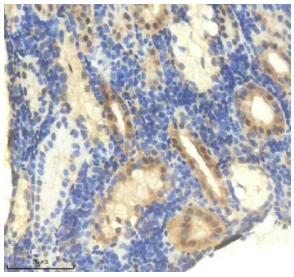
# Zebrafish IkB Alpha Antibody / NFKBIAA Antibody (RZ1351)

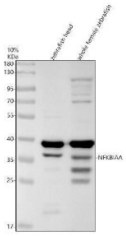
| Catalog No. | Formulation | Size |
|---|---|---|
| RZ1351 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

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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** | F1QCG4 |
| **Applications** | Western blot: 0.5-1ug/ml<br>Immunohistochemistry (FFPE): 2-5ug/ml |
| **Limitations** | This Zebrafish IkB Alpha Antibody / NFKBIAA Antibody is available for research use only. |



Zebrafish IkB Alpha / NFKBIAA Antibody Kidney IHC. Immunohistochemistry staining of FFPE zebrafish kidney tissue using Zebrafish IkB Alpha Antibody demonstrates cytoplasmic HRP-DAB brown staining within renal tubular epithelial cells and associated cellular populations. The staining pattern is consistent with expression of Nuclear Factor of Kappa Light Polypeptide Gene Enhancer in B-Cells Inhibitor Alpha A (NFKBIAA), also known as IkB Alpha, a key negative regulator of NF-kB signaling that controls inflammatory, immune, and stress-response pathways. Prominent staining within renal epithelial structures is consistent with the established role of NF-kB regulatory proteins in maintaining tissue homeostasis and coordinating cellular responses to physiological and environmental stimuli. Heat mediated antigen retrieval was performed in EDTA buffer. Primary antibody was incubated overnight at 4Â°C followed by detection using a peroxidase-conjugated goat anti-rabbit secondary antibody and DAB chromogen.



Zebrafish IkB Alpha / NFKBIAA Antibody NF-kB Signaling WB. Western blot analysis of zebrafish head tissue and whole female zebrafish lysates using Zebrafish IkB Alpha Antibody demonstrates a prominent immunoreactive band at approximately 35 kDa, consistent with the predicted molecular weight of Nuclear Factor of Kappa Light Polypeptide Gene Enhancer in B-Cells Inhibitor Alpha A (NFKBIAA), also known as IkB Alpha. Additional lower and higher molecular weight immunoreactive bands are observed and may represent modified forms, degradation products, or other antibody-reactive species. NFKBIAA is a key negative regulator of NF-kB signaling that controls inflammatory, immune, and cellular stress-response pathways through sequestration of NF-kB transcription factors in the cytoplasm. 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 IkB Alpha Antibody / NFKBIAA Antibody recognizes Nuclear Factor of Kappa Light Polypeptide Gene Enhancer in B-Cells Inhibitor Alpha A (NFKBIAA), a cytoplasmic regulatory protein that functions as a principal inhibitor of NF-kB signaling. NFKBIAA binds NF-kB transcription factor complexes and prevents their translocation to the nucleus, thereby suppressing expression of genes involved in inflammation, immunity, stress responses, and cell survival. Following activation by inflammatory cytokines, microbial products, or cellular stress signals, NFKBIAA undergoes phosphorylation and degradation, allowing NF-kB proteins to enter the nucleus and initiate transcriptional responses. The highly conserved nature of NF-kB signaling pathways has established zebrafish as an important vertebrate model for investigating NFKBIAA function and immune regulation.

NF-kB signaling serves as a central coordinator of innate immune and inflammatory responses. In zebrafish, NFKBIAA contributes to regulation of host defense mechanisms, cytokine production, pathogen responses, and immune system development. Because NFKBIAA functions as a critical negative regulator of NF-kB activity, its expression and degradation are frequently monitored as indicators of pathway activation. Researchers commonly evaluate NFKBIAA levels during studies of infection, inflammation, environmental stress, and immune signaling.

Beyond its role in immunity, NF-kB signaling influences embryonic development, tissue homeostasis, apoptosis, regeneration, and cellular adaptation to stress. Proper regulation of NFKBIAA is therefore essential for maintaining balanced signaling activity and preventing excessive inflammatory responses. Alterations in NF-kB regulatory mechanisms have been associated with chronic inflammation, immune dysfunction, developmental abnormalities, and disease-associated signaling pathways across vertebrate species.

Zebrafish provide unique opportunities for examining NF-kB pathway regulation because immune responses and developmental processes can be directly visualized in vivo. Researchers frequently investigate NFKBIAA expression in studies involving infection biology, wound healing, regeneration, toxicology, and inflammatory signaling. Because many components of the NF-kB pathway are highly conserved between zebrafish and mammals, findings generated using zebrafish models often provide valuable insight into vertebrate immune regulation and cellular stress responses.

At NSJ Bioreagents, we provide highly validated antibodies for immunology, inflammation research, developmental biology, and zebrafish studies. Zebrafish IkB Alpha Antibody / NFKBIAA Antibody targets a key inhibitor of NF-kB signaling pathways. NFKBIAA expression is widely studied in the context of inflammation, innate immunity, host defense, stress responses, and immune system regulation. Continued investigation of this important signaling regulator is expanding our understanding of the molecular mechanisms that govern immune homeostasis and vertebrate physiology.

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 IkB Alpha Antibody / NFKBIAA Antibody should be determined empirically by the investigator.

## Immunogen

An E.coli-derived Zebrafish NFKBIAA recombinant protein (amino acids M1-V227) was used as the immunogen for the Zebrafish IkB Alpha / NFKBIAA Antibody.

## Storage

After reconstitution, the Zebrafish IkB Alpha / NFKBIAA 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 NFKBIAA Antibody, Zebrafish NF-kB Inhibitor Alpha A Antibody, Zebrafish IkB Alpha A Antibody, Zebrafish NF-kB Regulatory Protein Antibody, Zebrafish NF-kB Inhibitory Protein Antibody, Zebrafish IkappaB Alpha Antibody


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