# Zebrafish Bcl2a Antibody / Bcl-2 (RZ1206)

| Catalog No. | Formulation | Size |
|---|---|---|
| RZ1206 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

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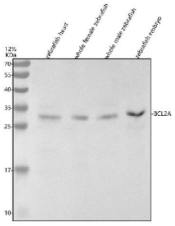
| **Availability** | 2-3 weeks |
| **Species Reactivity** | Zebrafish |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit Ig |
| **Purity** | Antigen affinity chromatography |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | Q564A4 |
| **Applications** | Western Blot : 0.5-1ug/ml |
| **Limitations** | This Zebrafish Bcl2a antibody is available for research use only. |



Zebrafish Bcl2a / Bcl-2 Antibody Tissue WB. Western blot analysis of Bcl2a protein using Zebrafish Bcl2a antibody and 1) zebrafish head, 2) whole female zebrafish, 3) whole male zebrafish and 4) zebrafish embryo tissue lysate. Predicted molecular weight ~26 kDa.

## Description

The Zebrafish Bcl2a antibody targets Bcl2a, an anti-apoptotic mitochondrial protein that regulates cell survival, developmental cell turnover, and tissue homeostasis in Danio rerio. Zebrafish, also known as Danio rerio, express bcl2a as a functional homolog of mammalian Bcl-2, sharing the characteristic BH1, BH2, BH3, and BH4 domains that govern interactions with pro- and anti-apoptotic family members. Bcl2a localizes primarily to the outer mitochondrial membrane, where it modulates mitochondrial permeability, inhibits apoptotic signaling, and influences metabolic state and redox balance during development. Its expression spans multiple embryonic tissues, particularly those undergoing dynamic remodeling such as the brain, somites, heart, and endodermal organs.

Bcl2a belongs to the Bcl2 family of apoptosis regulators, which collectively determine whether cells survive or undergo programmed cell death in response to developmental cues, stress, or damage. In zebrafish embryos, bcl2a expression helps maintain the viability of neural progenitors, cardiac precursors, and early muscle-forming cells. A Zebrafish Bcl2a antibody is suitable for research applications examining mitochondrial-associated expression in tissues where cell survival and apoptosis must remain tightly balanced to support proper morphogenesis.

Bcl2a functions by binding and neutralizing pro-apoptotic proteins such as Bax and Bak, thereby preserving mitochondrial integrity and preventing the initiation of caspase cascades. In zebrafish, this regulation shapes developmental processes including neural tube formation, cardiac growth, craniofacial patterning, and organogenesis in systems such as the pancreas and liver. Bcl2a activity also influences stress responses during early developmental windows, helping cells adapt to metabolic challenges and oxidative fluctuations. Because apoptosis plays an essential role in sculpting tissues, Bcl2a serves as a key molecular checkpoint controlling where and when cell death occurs.

Structurally, Bcl2a contains the hallmark Bcl2 family domains that support membrane association, protein-protein interactions, and regulation of apoptotic machinery. The protein anchors to mitochondria through its C-terminal transmembrane region, allowing it to influence membrane permeabilization dynamics. Zebrafish bcl2a maps to chromosome 6, and regulatory elements near the gene direct stage-specific expression in developing neural, cardiac, and mesodermal tissues. Co-localization studies often detect Bcl2a alongside markers of mitochondrial mass, metabolic activity, or anti-apoptotic signaling networks, providing insight into physiological states where cellular protection is required.

A Zebrafish Bcl2a antibody is suitable for detecting Bcl2a in developmental studies exploring apoptosis regulation, mitochondrial function, metabolic adaptation, and tissue remodeling in Danio rerio. Its mitochondrial localization makes it useful for defining survival domains within neuroepithelial tissues, somites, cardiac primordia, and other regions undergoing morphogenetic transitions. Bcl2a expression can shift with developmental stage or stress exposure, making it a valuable marker for research examining how cell survival programs integrate with growth, patterning, and differentiation. These features support investigations into regulated cell death, mitochondrial biology, and tissue resilience during vertebrate development, and this reagent is provided for research use by NSJ Bioreagents.

This Zebrafish antibody is part of a broader Zebrafish / Danio rerio antibody panel offered by NSJ Bioreagents.

## Application Notes

Optimal dilution of the Zebrafish Bcl2a antibody should be determined by the researcher.

## Immunogen

E. coli-derived zebrafish Bcl2a recombinant protein (amino acids M1-K228) was used as the immunogen for the Zebrafish Bcl2a antibody.

## Storage

After reconstitution, the Zebrafish Bcl2a antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.