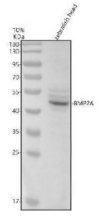
Zebrafish BMP2 Antibody / BMP2A Antibody (RZ1358)

Catalog No.	Formulation	Size
RZ1358	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	O13109
Applications	Western Blot : 0.5-1ug/ml
Limitations	This Zebrafish BMP2 Antibody / BMP2A Antibody is available for research use only.



Zebrafish BMP2 / BMP2A Antibody Developmental Morphogen WB. Western blot analysis of zebrafish head tissue lysate using Zebrafish BMP2 Antibody demonstrates a prominent immunoreactive band at approximately 45 kDa, consistent with the predicted molecular weight of Bone Morphogenetic Protein 2A (BMP2A). BMP2A is a member of the TGF-beta superfamily and functions as a developmental growth factor that regulates embryonic patterning, skeletal formation, tissue differentiation, and organ development. The observed band is consistent with expression of BMP2A in zebrafish tissue and supports its established role in developmental signaling pathways that govern morphogenesis and vertebrate tissue formation. A faint lower molecular weight immunoreactive band is also present and may represent a processed form, degradation product, or other antibody-reactive species. 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 BMP2 Antibody / BMP2A Antibody recognizes Bone Morphogenetic Protein 2A (BMP2A), a secreted signaling molecule belonging to the transforming growth factor-beta (TGF-beta) superfamily. BMP2A functions as an important developmental morphogen that regulates embryonic patterning, tissue differentiation, skeletal formation, and organ

development. Through activation of BMP signaling pathways, BMP2A influences cellular proliferation, lineage specification, and morphogenetic processes required for normal vertebrate development. The highly conserved nature of BMP signaling has established zebrafish as an important model for investigating BMP2A biology and developmental regulation.

BMP family proteins play central roles during embryogenesis by controlling tissue patterning and directing developmental cell fate decisions. In zebrafish, BMP2A contributes to formation of skeletal structures, cardiovascular tissues, neural development, and early embryonic organization. Expression of BMP2A is frequently examined in studies investigating developmental biology, organogenesis, regeneration, and tissue morphogenesis. Because BMP signaling pathways influence numerous developmental events, BMP2A serves as an important marker of growth factor-mediated developmental regulation.

Beyond embryonic development, BMP2A participates in tissue maintenance, repair, and regeneration. Members of the BMP family regulate differentiation of mesenchymal and osteogenic cell populations and contribute to maintenance of tissue homeostasis. Researchers commonly evaluate BMP2A expression in studies focused on bone biology, regenerative medicine, stem cell differentiation, and developmental signaling pathways. As a result, BMP2A remains one of the most widely studied developmental growth factors within vertebrate systems.

Zebrafish provide unique advantages for investigating BMP signaling because developmental processes can be directly visualized in living embryos and larvae. Researchers frequently monitor BMP2A expression during studies of skeletal development, fin regeneration, cardiovascular formation, embryonic patterning, and developmental toxicology. Because BMP signaling mechanisms are highly conserved between zebrafish and mammals, findings generated using zebrafish models often provide valuable insight into vertebrate developmental biology and tissue regeneration.

At NSJ Bioreagents, we provide highly validated antibodies for developmental biology, stem cell biology, regenerative medicine, and zebrafish research. Zebrafish BMP2 Antibody / BMP2A Antibody targets a key growth factor involved in embryogenesis, skeletal development, and tissue morphogenesis. BMP2A expression is widely studied in the context of developmental signaling, organ formation, regeneration, osteogenesis, and vertebrate development. Continued investigation of this important morphogen is expanding our understanding of the molecular pathways that regulate tissue formation and developmental patterning.

Explore our BMP2 Antibody / Osteogenic Growth Factor Antibody page for additional validation data and applications involving skeletal development, osteogenesis, and tissue regeneration.

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 BMP2 Antibody / BMP2A Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish BMP2A recombinant protein (amino acids L24-R279) was used as the immunogen for the Zebrafish BMP2 / BMP2A Antibody.

Storage

After reconstitution, the Zebrafish BMP2 / BMP2A 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 BMP2A Antibody, Zebrafish Bone Morphogenetic Protein 2A Antibody, Zebrafish Osteogenic Growth Factor Antibody, Zebrafish TGF-Beta Superfamily Protein Antibody, Zebrafish Developmental Morphogen Antibody, Zebrafish