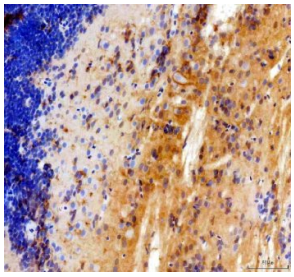
Zebrafish Myostatin Antibody / MSTNA Antibody (RZ1372)

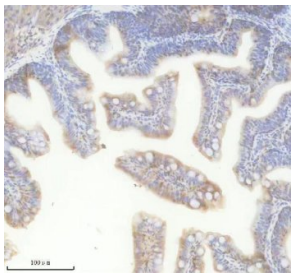
Catalog No.	Formulation	Size
RZ1372	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

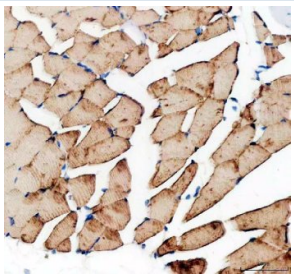
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Lyophilized from a buffered saline solution containing 2% trehalose. Reconstitute with 0.2 mL distilled water to yield a final antibody concentration of 500 ug/mL.
UniProt	Q68IN2
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This Zebrafish Myostatin Antibody / MSTNA Antibody is available for research use only.



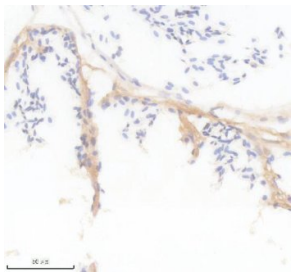
Zebrafish Myostatin Antibody Colon IHC. Immunohistochemistry analysis of MSTNA using Zebrafish Myostatin Antibody / MSTNA Antibody demonstrates distinct cytoplasmic HRP-DAB brown staining within smooth muscle and stromal-associated cellular populations of zebrafish colon tissue. The staining pattern is consistent with expression of Myostatin A (MSTNA), a member of the TGF-beta superfamily that functions as a negative regulator of muscle growth and tissue remodeling. Prominent immunoreactivity within muscle-associated compartments supports the established role of MSTNA in regulating muscle development, cellular differentiation, and growth control pathways. The observed staining demonstrates the utility of this antibody for studies of gastrointestinal muscle biology, myogenesis, developmental signaling, and tissue homeostasis in zebrafish models. Heat-mediated antigen retrieval was performed in EDTA buffer prior to staining.



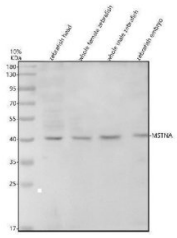
Zebrafish Myostatin Antibody Muscle IHC. Immunohistochemistry analysis of MSTNA using Zebrafish Myostatin Antibody / MSTNA Antibody demonstrates distinct cytoplasmic HRP-DAB brown staining within zebrafish muscle-associated tissue structures. The staining pattern is consistent with expression of Myostatin A (MSTNA), a TGF-beta superfamily member that functions as a key negative regulator of skeletal muscle growth, differentiation, and tissue homeostasis. Immunoreactivity is observed within muscle cell populations, supporting the established role of MSTNA in controlling myogenesis and maintaining normal muscle development. The observed staining demonstrates the utility of this antibody for studies of muscle biology, growth regulation, developmental signaling, regenerative processes, and vertebrate myogenic pathways in zebrafish models. Heat-mediated antigen retrieval was performed in EDTA buffer prior to staining.



Zebrafish Myostatin Antibody Heart IHC. Immunohistochemistry analysis of MSTNA using Zebrafish Myostatin Antibody / MSTNA Antibody demonstrates widespread cytoplasmic HRP-DAB brown staining throughout zebrafish cardiac muscle fibers. The staining pattern is consistent with expression of Myostatin A (MSTNA), a member of the TGF-beta superfamily that functions as a key regulator of muscle growth, differentiation, and tissue homeostasis. Robust immunoreactivity within striated cardiomyocytes supports the role of MSTNA-associated signaling pathways in muscle development and maintenance. The observed staining demonstrates the utility of this antibody for studies of cardiac muscle biology, myogenesis, developmental regulation, growth control, and muscle-related signaling mechanisms in zebrafish models. Heat-mediated antigen retrieval was performed in EDTA buffer prior to staining.



Zebrafish Myostatin Antibody WB. Western blot analysis of MSTNA using Zebrafish Myostatin Antibody / MSTNA Antibody demonstrates a distinct immunoreactive band at approximately 41 kDa in zebrafish head, whole female, whole male, and embryo tissue lysates. The observed molecular weight is consistent with the predicted size of Myostatin A (MSTNA), a member of the TGF-beta superfamily that functions as a key negative regulator of skeletal muscle growth and development. Detection of the expected target across multiple developmental and adult tissue samples supports broad expression of MSTNA and confirms specific recognition of the protein. The observed immunoreactivity demonstrates the utility of this antibody for studies of myogenesis, muscle growth regulation, developmental signaling, regenerative biology, and TGF-beta pathway function in zebrafish models.



Description

Zebrafish Myostatin Antibody / MSTNA Antibody recognizes Myostatin A (MSTNA), a member of the Transforming Growth Factor Beta (TGF-beta) superfamily that functions as a critical negative regulator of skeletal muscle growth and development. MSTNA is the zebrafish ortholog of mammalian Myostatin, also known as Growth Differentiation Factor 8 (GDF8), and plays an important role in controlling muscle mass, myogenesis, and tissue homeostasis. By limiting excessive muscle growth, MSTNA helps maintain the balance between cellular proliferation, differentiation, and maturation required for normal vertebrate muscle development.

Myostatin is synthesized as a precursor protein that undergoes proteolytic processing to generate a mature biologically active growth factor. Following activation, MSTNA signals through activin receptor complexes and downstream SMAD signaling pathways to suppress myoblast proliferation and differentiation. This signaling network serves as an essential checkpoint that regulates muscle growth and prevents uncontrolled expansion of skeletal muscle tissue. The importance of Myostatin is demonstrated by studies across multiple vertebrate species, where loss of function mutations result in substantial increases in muscle mass and altered muscle development.

Zebrafish have become an important model for investigating vertebrate muscle biology, developmental signaling, tissue regeneration, and growth regulation. Following genome duplication events, zebrafish possess both mstna and mstnb paralogs, providing researchers with unique opportunities to study specialized functions within the Myostatin signaling pathway. Expression of MSTNA is associated with skeletal muscle development and maintenance, making it a valuable marker for investigations of myogenesis, muscle fiber formation, and growth control during development and adulthood.

In addition to regulating muscle development, MSTNA is relevant to studies of muscle regeneration, metabolic regulation, growth disorders, and skeletal muscle disease. Alterations in Myostatin signaling can influence muscle fiber size, regenerative capacity, and tissue repair responses. Consequently, MSTNA has become an important target in research focused on muscle wasting disorders, regenerative biology, aquaculture, developmental genetics, and the molecular mechanisms that control vertebrate muscle growth.

At NSJ Bioreagents, we provide highly validated antibodies for developmental biology, muscle biology, and zebrafish research applications. Zebrafish Myostatin Antibody / MSTNA Antibody is useful for investigations of myogenesis, skeletal muscle development, growth regulation, regenerative biology, and TGF-beta family signaling pathways. Continued study of MSTNA is advancing our understanding of how vertebrates regulate muscle mass, tissue repair, and developmental growth processes.

Researchers studying skeletal muscle development, growth regulation, and myostatin signaling may also be interested in our Myostatin Antibody page.

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 Myostatin Antibody / MSTNA Antibody should be determined empirically by the investigator.

Immunogen

An E.coli-derived Zebrafish MSTNA recombinant protein (amino acids Q29-N228) was used as the immunogen for the Zebrafish Myostatin / MSTNA Antibody.

Storage

After reconstitution, the Zebrafish Myostatin / MSTNA 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 Myostatin Antibody, Zebrafish MSTNA Antibody, Zebrafish MSTN Antibody, Zebrafish Growth Differentiation Factor 8 Antibody, Zebrafish GDF8 Antibody, Zebrafish Myostatin A Antibody

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