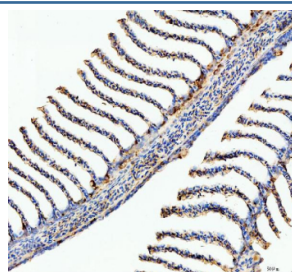


Zebrafish Ostf1 Antibody / Osteoclast-stimulating factor 1 (RZ1256)

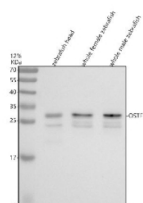
Catalog No.	Formulation	Size
RZ1256	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

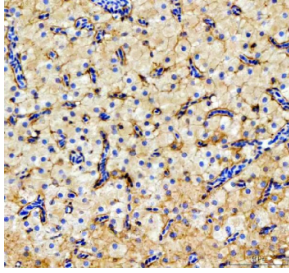
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q6TGW5
Localization	Cytoplasm
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish Ostf1 antibody is available for research use only.



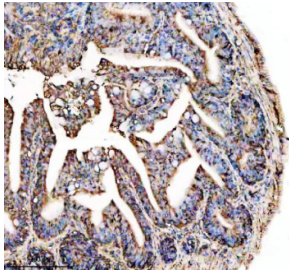
Zebrafish Ostf1 Antibody Fin Tissue IHC. Immunohistochemistry staining of FFPE zebrafish fin tissue with Ostf1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



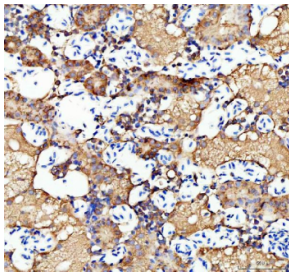
Zebrafish Ostf1 Antibody Tissue WB. Western blot analysis of OSTF1 protein using Zebrafish OSTF1 antibody and 1) zebrafish head, 2) whole female zebrafish and 3) whole male zebrafish tissue lysate. Predicted molecular weight ~24 kDa, commonly observed at 24-28 kDa (human similarity).



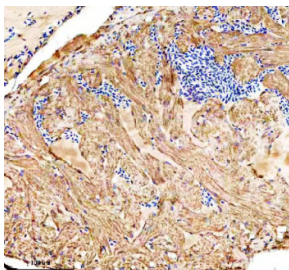
Zebrafish Ostf1 Antibody Liver Tissue IHC. Immunohistochemistry staining of FFPE zebrafish liver tissue with Ostf1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



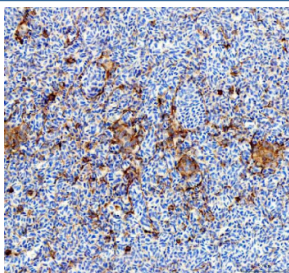
Zebrafish Ostf1 Antibody Colon Tissue IHC. Immunohistochemistry staining of FFPE zebrafish colon tissue with Ostf1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Ostf1 Antibody Kidney Tissue IHC. Immunohistochemistry staining of FFPE zebrafish kidney tissue with Ostf1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Ostf1 Antibody Heart Tissue IHC. Immunohistochemistry staining of FFPE zebrafish heart tissue with Ostf1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Ostf1 Antibody Spleen Tissue IHC. Immunohistochemistry staining of FFPE zebrafish spleen tissue with Ostf1 antibody, HRP-labeled secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

The Zebrafish Ostf1 antibody targets Ostf1, also known as Osteoclast-stimulating factor 1, a stress-responsive cytoplasmic protein involved in ion homeostasis, osmoregulation, skeletal development, and epithelial stress signaling in *Danio rerio*. Zebrafish, also known as *Danio rerio*, express ostf1 in multiple developing tissues, with strong enrichment in gill ionocytes, kidney epithelium, bone-associated cells, and other structures responding to osmotic or mechanical stress. Ostf1 localizes primarily to the cytoplasm, where it participates in intracellular signaling pathways activated during ionic imbalance, tissue adaptation, and osteoclast-related processes.

Ostf1 belongs to a conserved family of stress-inducible proteins originally characterized for their ability to enhance osteoclast formation in mammals. In zebrafish, ostf1 expression is highly responsive to osmotic challenges, such as exposure to hyperosmotic environments or fluctuations in external ion composition. A Zebrafish Ostf1 antibody is suitable for detecting cytoplasmic signals in ion-transporting epithelia, bone-associated tissues, and other regions undergoing stress-induced regulatory responses during early development.

Functionally, Ostf1 plays important roles in osmoregulatory adaptation. In zebrafish gills and embryonic ionocytes, Ostf1 is rapidly upregulated following salinity changes, where it modulates the activity or expression of ion-transport proteins involved in Na⁺, Cl⁻, and Ca²⁺ balance. This regulation supports physiological adjustment to environmental stress and contributes to epithelial resilience. Beyond osmoregulation, Ostf1 is also linked to skeletal and bone remodeling pathways. Its mammalian counterparts can stimulate osteoclast differentiation, and zebrafish ostf1 is expressed in tissues associated with craniofacial and skeletal patterning, suggesting conserved roles in bone turnover and structural development.

Ostf1 further participates in cellular signaling cascades activated by extracellular stressors. It interacts with pathways such as MAPK, calcium-dependent signaling modules, and cytoskeletal remodeling systems that allow epithelial and mesenchymal tissues to adapt to mechanical strain, ionic shifts, or metabolic challenges. Disruption of ostf1 expression can impair osmoregulatory capacity, alter gill ionocyte distribution, and affect tissue integrity during stress. Because zebrafish provide transparent stages and strong environmental responsiveness, Ostf1 serves as a powerful marker for studying osmoregulation, epithelial stress signaling, and bone remodeling under developmental and experimental conditions.

Structurally, zebrafish Ostf1 contains conserved domains that support interactions with intracellular signaling proteins and regulatory complexes. The gene maps to chromosome 9, with expression modulated by environmental salinity, endocrine influences, and developmental cues regulating ionocyte differentiation. Co-localization studies frequently detect Ostf1 in gill epithelium, pronephric tubules, craniofacial structures, and osmoregulatory ionocytes marked by transporters such as Nka, Ncc, and Ecac. These distribution patterns reflect its central role in ionic homeostasis and stress adaptation.

A Zebrafish Ostf1 antibody is suitable for detecting Ostf1 in studies focused on osmoregulation, epithelial stress signaling, bone biology, and environmental physiology in *Danio rerio*. Its cytoplasmic localization helps researchers examine rapid stress-induced changes, characterize ionocyte development, evaluate skeletal remodeling, and analyze molecular pathways underlying adaptation to environmental fluctuations. Ostf1 expression is widely used in zebrafish models investigating ion transport regulation, metabolic stress, and tissue resilience. This antibody is supplied 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 Ostf1 antibody should be determined by the researcher.

Immunogen

E. coli-derived zebrafish Ostf1 recombinant protein (amino acids R57-K190) was used as the immunogen for the Zebrafish Ostf1 antibody.

Storage

After reconstitution, the Zebrafish Ostf1 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.

