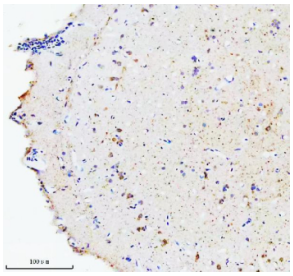
Zebrafish Hsc70 Antibody / Hspa8 (RZ1113)

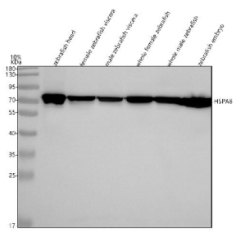
Catalog No.	Formulation	Size
RZ1113	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

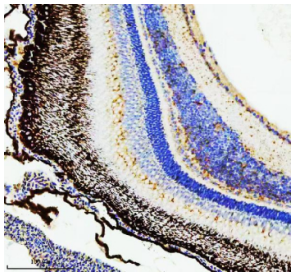
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q90473
Localization	Cytoplasm, cell membrane, nucleolus
Applications	Western blot: 0.5-1 ug/ml Immunohistochemistry (FFPE): 2-5 ug/ml
Limitations	This Zebrafish Hsc70 antibody is available for research use only.



Zebrafish Hsc70 Antibody Brain IHC. Immunohistochemistry staining of FFPE zebrafish brain tissue with Zebrafish Hsc70 antibody, HRP secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Zebrafish Hsc70 Antibody WB. Western blot analysis of Hsc70/HSPA8 protein using Hsc70 antibody and 1) zebrafish head, 2) female zebrafish viscera, 3) male zebrafish viscera, 4) whole female zebrafish, 5) whole male zebrafish and 6) zebrafish embryo tissue lysate. Predicted molecular weight ~71 kDa.



Zebrafish Hsc70 Antibody Retina IHC. Immunohistochemistry staining of FFPE zebrafish retina tissue with Zebrafish Hsc70 antibody, HRP secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Zebrafish (Danio rerio) Hsc70 antibody detects Hsc70, a constitutively expressed member of the Hsp70 family that plays essential roles in protein folding, stabilization, translocation, and quality control. In zebrafish, the hspa8 gene encodes this highly conserved chaperone, which assists nascent polypeptides during synthesis, prevents aggregation of misfolded proteins, and collaborates with co-chaperones to regulate proteostasis throughout the cell. Hspa8 participates in numerous housekeeping processes including clathrin uncoating, receptor trafficking, cytoskeletal remodeling, and degradation of misfolded proteins through lysosomal and proteasomal pathways. Because of its central function in proteome maintenance, Zebrafish Hsc70 antibody reagents are widely used in studies of developmental biology, cellular stress response, and protein homeostasis.

Hsc70 is ubiquitously expressed across zebrafish tissues, with elevated levels in metabolically active or rapidly developing regions such as the brain, somites, heart, and gastrointestinal system. Its constant expression contrasts with stress-inducible Hsp70 isoforms, allowing Hsc70 to support fundamental folding and remodeling steps required throughout embryogenesis. During development, Hspa8 interacts with a wide array of client proteins including kinases, cytoskeletal regulators, transcription factors, and membrane-associated proteins. Proper chaperone activity ensures that structural and signaling molecules achieve correct conformation, supporting coordinated tissue formation and developmental robustness.

As part of the cellular quality control network, Hsc70 collaborates with Hsp40 co-chaperones, BAG family nucleotide exchange factors, and ubiquitin-dependent degradation pathways. It assists in the refolding of stress-denatured proteins, directs terminally misfolded substrates toward degradation, and participates in chaperone-mediated autophagy by recognizing KFERQ-like motifs on target proteins. In zebrafish, these pathways help maintain proteome stability during rapid growth and exposure to environmental fluctuations, safeguarding neural development, muscle maintenance, and metabolic transitions.

Hsc70 also plays integral roles in vesicle trafficking and receptor regulation. Its ATP-dependent association with clathrin-coated vesicles promotes uncoating during endocytosis and influences receptor recycling, cell signaling, and membrane dynamics. These functions are particularly important in neurons and epithelial cells where membrane turnover is high. Additionally, Hspa8 participates in cytoskeletal organization by regulating actin and microtubule-associated proteins, enabling shape changes, migration, and tissue morphogenesis.

At the molecular level, Hsc70 contains an N-terminal ATPase domain and a C-terminal substrate-binding domain that together coordinate client recognition and conformational cycling. Its interactions with folding cofactors and degradation machinery allow it to act as a central hub in proteostasis regulation. Subcellular localization includes the cytoplasm, nucleus, and organelle-associated regions depending on developmental stage and cellular demand.

A Zebrafish Hsc70 antibody is suitable for research applications such as western blotting, immunohistochemistry, and assays examining chaperone function, protein folding, stress recovery, and membrane trafficking. This antibody targets Hsc70 for studies involving proteostasis, developmental signaling, and cellular homeostasis. NSJ Bioreagents provides the Zebrafish Hsc70 antibody to support investigations in protein quality control and vertebrate developmental biology.

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

Application Notes

Optimal dilution of the Zebrafish Hsc70 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Hsc70/HSPA8 recombinant protein (amino acids K539-K601) was used as the immunogen for the Zebrafish Hsc70 antibody.

Storage

After reconstitution, the Zebrafish Hsc70 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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