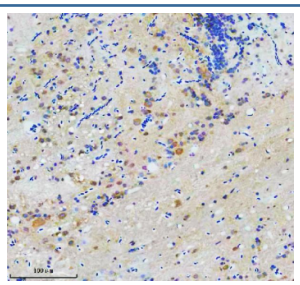
Zebrafish Cct7 Antibody / T-complex protein 1 subunit eta / Tcp1 Eta (RZ1062)

Catalog No.	Formulation	Size
RZ1062	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	Q8JHG7
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 2-5 ug/ml
Limitations	This Zebrafish Cct7 antibody is available for research use only.



Zebrafish Cct7 Antibody Brain IHC. Immunohistochemical analysis of Cct7 protein using Zebrafish Cct7 antibody and paraffin-embedded zebrafish brain tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Zebrafish (Danio rerio) Cct7 antibody recognizes T-complex protein 1 subunit eta, also called Tcp1 Eta, encoded by the zebrafish cct7 gene. Cct7 is one of eight essential subunits of the cytosolic chaperonin-containing TCP1 complex (CCT), a molecular machine that folds a wide range of cytoskeletal and regulatory proteins. In Danio rerio embryos, Cct7 is expressed ubiquitously during early cleavage and gastrulation stages, with increased enrichment in developing brain,

neural tube, somites, heart, notochord, and endoderm-derived tissues including liver and pancreas. Subcellular localization is cytosolic, consistent with its participation in ATP-dependent protein folding and assembly of structurally complex substrates.

T-complex protein 1 subunit eta contributes to the formation of the double-ring CCT complex, which assists in the folding of actin, tubulin, and numerous other proteins required for cytoskeletal organization, cell division, and intracellular transport. As zebrafish embryos undergo rapid proliferation and dynamic morphogenetic movements, Cct7 activity helps maintain proteostasis and ensures correct folding of structural proteins that drive cell shape, polarity, and movement. Loss of CCT complex function in vertebrates disrupts cytoskeletal integrity, leading to impaired tissue organization and defects in early development.

Neural development is strongly dependent on Cct7-mediated folding pathways. Developing neurons require efficiently folded actin and tubulin for axon formation, growth cone navigation, mitotic spindle assembly, and neurite branching. Cct7 supports cytoskeletal stability within neural progenitors and differentiating neurons, enabling proper brain patterning, neural tube architecture, and synaptic development. Because neural tissue undergoes rapid structural remodeling, disruptions in Cct7 function can result in abnormal neurogenesis or compromised neural circuit assembly.

In muscle and somite development, Cct7 regulates folding of cytoskeletal proteins required for myofibril assembly, sarcomere alignment, and early muscle fiber formation. Somitic cells rely on robust cytoskeletal networks to coordinate segmentation, cell migration, and myotome organization. Cct7 ensures that contractile proteins and scaffolding components reach their native conformations, supporting the emergence of functional muscle architecture.

Cardiac development also requires Cct7 activity. The zebrafish heart forms rapidly from proliferating cardiomyocytes that depend on properly folded cytoskeletal and contractile proteins. Cct7 supports actin and tubulin networks that influence cardiac tube formation, contractility, and chamber maturation. Perturbation of CCT complex function is associated with reduced cardiac output, impaired looping, and altered myocardial structure.

Endoderm-derived organs depend on cytoskeletal and metabolic stability during growth and differentiation. In liver, pancreas, and intestinal primordia, Cct7 contributes to structural organization, intracellular trafficking, and maintenance of proteome integrity as these tissues expand. Because protein misfolding can trigger stress-response pathways, Cct7 helps maintain developmental homeostasis by preventing accumulation of misfolded or aggregated proteins.

Beyond individual tissues, Cct7 influences global embryonic fitness by supporting folding and assembly of proteins involved in transcription, signaling, and metabolic regulation. Zebrafish embryos experiencing metabolic or oxidative stress rely on chaperonin complexes to stabilize damaged proteins and preserve proteostasis.

This Zebrafish Cct7 antibody is suitable for detecting T-complex protein 1 subunit eta in research focused on chaperonin biology, cytoskeletal organization, neural and muscle development, cardiac morphogenesis, and proteostasis regulation in zebrafish. NSJ Bioreagents provides this reagent within its zebrafish and protein-folding antibody catalog.

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

Application Notes

Optimal dilution of the Zebrafish Cct7 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish Cct7 recombinant protein (amino acids Q31-N307) was used as the immunogen for the Zebrafish Cct7 antibody.

Storage

After reconstitution, the Zebrafish Cct7 antibody can be stored for up to one month at 4oC. For long-term, aliquot and

store at -20oC. Avoid repeated freezing and thawing.