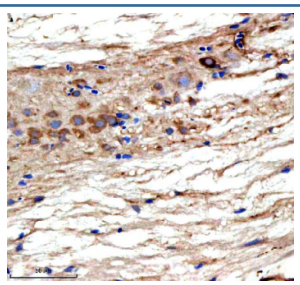
Zebrafish Ttc28 Antibody / Tetratricopeptide repeat protein 28 / TPRBK (RZ1008)

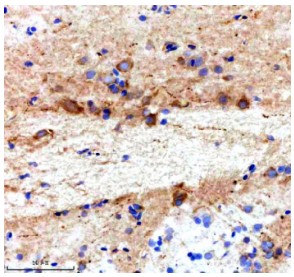
Catalog No.	Formulation	Size
RZ1008	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

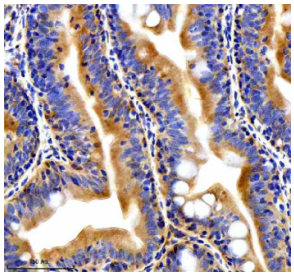
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	A0A8M6Z8C1
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 2-5 ug/ml
Limitations	This Zebrafish Ttc28 antibody is available for research use only.



Immunohistochemical analysis of Ttc28 protein using Ttc28 antibody and paraffin-embedded zebrafish spinal cord tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Immunohistochemical analysis of Ttc28 protein using Ttc28 antibody and paraffin-embedded zebrafish brain tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Immunohistochemical analysis of Ttc28 protein using Ttc28 antibody and paraffin-embedded zebrafish colon tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

Zebrafish (Danio rerio) Ttc28 antibody recognizes Tetratricopeptide repeat protein 28, also known as TPRBK, a conserved scaffolding and regulatory protein encoded by the zebrafish ttc28 gene on chromosome 10. TTC28 contains multiple tetratricopeptide repeat motifs that enable protein-protein interactions and assembly of signaling complexes. These repeat motifs form helical scaffolds that facilitate binding to diverse partners, allowing TTC28 to contribute to cytoskeletal organization, cell cycle regulation, and intracellular trafficking. In zebrafish, Ttc28 is expressed during early embryogenesis and in developing neural, muscular, and epithelial tissues where dynamic cellular remodeling occurs. Subcellular localization studies indicate that Ttc28 primarily resides in the cytoplasm, with enrichment near centrosomes, microtubule-associated structures, and actin-rich domains.

Tetratricopeptide repeat protein 28 participates in pathways related to microtubule stability, cytoskeletal coordination, and mitotic progression. TTC28 has been implicated in spindle orientation and proper chromosome segregation, acting through interactions with centrosomal regulators and cytoskeletal effectors. In zebrafish embryos, Ttc28 is required for tissue morphogenesis, including processes that shape brain structures, somite formation, and epithelial integrity. Its scaffolding role enables assembly of complexes that coordinate cytoskeletal remodeling during cell migration and collective tissue movements. Ttc28 may also influence vesicular trafficking and membrane organization by linking cytoskeletal networks with endosomal or Golgi-associated pathways.

Developmental studies show that ttc28 expression rises during early segmentation stages and persists in proliferating neuroepithelial regions where cell cycle transitions are frequent. Disruption of Ttc28 or related tetratricopeptide proteins can impair centrosome function, leading to mitotic delay, abnormal cell division patterns, and tissue patterning defects. In zebrafish models, impaired Ttc28 function has been associated with perturbed neural tube closure, reduced body axis extension, and defective somite alignment. Emerging evidence suggests links between Ttc28 and DNA damage response pathways, where its loss can sensitize cells to replication stress or impair proper checkpoint activation.

Tetratricopeptide repeat family proteins also have relevance in vertebrate disease contexts, including cancer, ciliopathies, and neurodevelopmental disorders. While zebrafish specific disease phenotypes of Ttc28 are still under investigation, its conserved role in spindle regulation and cytoskeleton organization positions it as an important factor in cell integrity and tissue formation. Because zebrafish embryos enable live imaging of cytoskeletal dynamics, Ttc28 is increasingly used in studies exploring mitotic mechanics, organogenesis, and environmental influences on development.

This Zebrafish Ttc28 antibody is suitable for detecting Tetratricopeptide repeat protein 28 in research focused on cytoskeletal signaling, spindle dynamics, cell cycle progression, neural development, epithelial organization, and embryonic morphogenesis in zebrafish. It supports studies examining centrosomal regulation, cytoskeletal remodeling,

mitotic fidelity, and tissue patterning under genetic or environmental perturbations. NSJ Bioreagents provides this reagent as part of its zebrafish and developmental biology antibody portfolio.

Application Notes

Optimal dilution of the Zebrafish Ttc28 antibody should be determined by the researcher.

Immunogen

An E.coli-derived zebrafish recombinant protein (amino acids Q1762-D1944) was used as the immunogen for the Zebrafish Ttc28 antibody.

Storage

After reconstitution, the Zebrafish Ttc28 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.