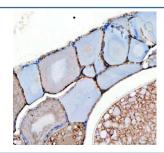


Zebrafish Kita Antibody / Kit / Scfr (RZ1184)

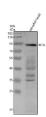
Catalog No.	Formulation	Size
RZ1184	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

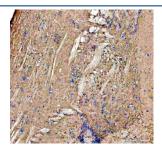
Availability	2-3 weeks
Species Reactivity	Zebrafish
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q8JFR5
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	This Zebrafish Kita antibody is available for research use only.



IHC staining of zebrafish Kita protein using Zebrafish Kita antibody, HRP-labeled secondary and DAB substrate. Kita was detected in a paraffin-embedded section of zebrafish ovary tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot analysis of Kita protein using Zebrafish Kita antibody and zebrafish head tissue lysates. Predicted molecular weight ~109 kDa.



IHC staining of zebrafish Kita protein using Zebrafish Kita antibody, HRP-labeled secondary and DAB substrate. Kita was detected in a paraffin-embedded section of zebrafish brain tissue. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.

Description

The Kit protein in zebrafish (Danio rerio), encoded by the kit gene (also referred to as kita or kitb depending on isoform), is a homolog of the mammalian c-Kit receptor, a type III receptor tyrosine kinase. Kit plays an essential role in multiple developmental processes, including melanocyte formation, germ cell development, and hematopoiesis.

Zebrafish possess two paralogs of the kit gene due to a teleost-specific genome duplication: kita and kitb. Among them, kita is primarily responsible for the development of melanophores, the pigment cells responsible for black coloration. Mutations in kita, such as the well-characterized sparse mutant, lead to a severe reduction in melanophore number, establishing Kit as a key regulator of pigment cell differentiation and migration.

The Kit receptor is activated by its ligand, Kit ligand (Kitlg or Stem Cell Factor), which initiates downstream signaling through pathways such as MAPK/ERK, PI3K/Akt, and JAK/STAT, promoting cell survival, proliferation, and migration. In addition to its role in pigmentation, zebrafish Kit signaling is implicated in the survival and migration of primordial germ cells (PGCs) and has been suggested to influence early blood cell development.

Zebrafish Kit proteins are functionally conserved with their mammalian counterparts, making the zebrafish model an effective system for investigating stem cell biology, oncogenic receptor tyrosine kinase signaling, and genetic disorders associated with KIT dysfunction, such as piebaldism and certain cancers.

Application Notes

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

Immunogen

E. coli-derived zebrafish Kita recombinant protein (amino acids R22-N946) was used as the immunogen for the Zebrafish Kita antibody.

Storage

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