Zebrafish Tie-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF928

DESCRIPTION

Species Reactivity	Zebrafish
Specificity	Detects zebrafish Tie-2 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) Tie-2, recombinant mouse Tie-2, and rhTie-1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant zebrafish Tie-2 Val22-His741 Accession # O73791
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

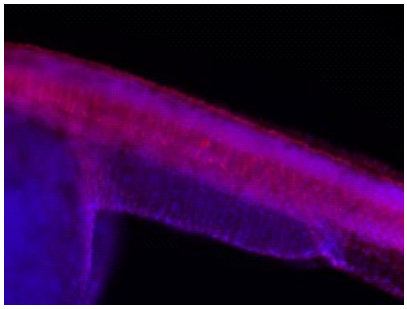
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Zebrafish Tie-2 Fc Chimera (Catalog # 928-T2)
Immunohistochemistry	5-15 µg/mL	See Below
Blockade of Receptor-ligand Interaction	In a functional ELISA, 4-10 µg/mL of this antibody will block 50% of the binding of 25 ng/mL of biotinylated Recombinant Human Ang-2 to immobilized Recombinant Zebrafish Tie-2 Fc Chimera (Catalog # 928-T2) coated at 4 µg/mL (100 µL/well). At 50 µg/mL, this antibody will block >90% of the binding.	

DATA

Immunohistochemistry



Tie-2 in Zebrafish Embryo. Tie-2 was detected in immersion fixed whole mount zebrafish embryo (24 hours old) using 10 µg/mL Goat Anti-Zebrafish Tie-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF928) overnight at 4 °C. Tissue was stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Tie-1/Tie (tyrosine kinase with Ig and EGF homology domains 1) and Tie-2/Tek comprise a receptor tyrosine kinase (RTK) subfamily with unique structural characteristics: two immunoglobulin-like domains flanking three epidermal growth factor (EGF)-like domains and followed by three fibronectin type III-like repeats in the extracellular region and a split tyrosine kinase domain in the cytoplasmic region. These receptors are expressed primarily on endothelial and hematopoietic progenitor cells and play critical roles in angiogenesis, vasculogenesis and hematopoiesis.

Zebrafish Tie-2 cDNA encodes a 1116 amino acid (aa) residue precursor protein shares 38% sequence homology with human Tie-2 in the extracellular domain. Two ligands, angiopoietin-1 (Ang1) and angiopoietin-2 (Ang2), which bind Tie-2 with high-affinity have been identified. Ang2 has been reported to act as an antagonist for Ang1. Mice engineered to overexpress Ang2 or to lack Ang1 or Tie-2 display similar angiogenesis defects.

References:

1. Partanen, J. and D.J. Dumont (1999) Curr. Top. Microbiol. Immunol. **237**:159.
2. Takakura, N. *et al.* (1998) Immunity **9**:677.
3. Procopio, W. *et al.* (1999) J. Biol. Chem. **274**:30196.

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