



Zebrafish Tie-2 Fc Chimera (DAG2654)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Recombinant Zebrafish Tie-2 Fc Chimera was expressed in Mouse myeloma cell line, NS0. N-terminus Zebrafish Tie-2 (Val22-His741) Accession # O73791), C-terminus Human IgG1 (Pro100-Lys330), Disulfide-linked homodimer
Antigen Description	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.
Species	Zebrafish
Purity	> 95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Conjugate	Unconjugated
Format	Lyophilized from a 0.2 µm filtered solution in PBS
Concentration	100 µg/mL
Buffer	PBS
Preservative	None
Storage	2-8°C short term, -20°C long term

BACKGROUND

Introduction

The angiopoietin receptors are receptors that bind angiopoietin. TIE-1 and TIE-2 comprise the cell-surface receptors that bind and are activated by the angiopoietins, (Ang1, Ang2, Ang3, Ang4). The angiopoietins are protein growth factors required for the formation of blood vessels (angiogenesis). The angiopoietins are protein growth factors that promote angiogenesis, the formation of blood vessels. There are now four identified angiopoietins: Ang1, Ang2, Ang3, Ang4. Ang1 and Ang4 function as agonistic or activating ligands for Tie2, whereas Ang2 and Ang3 behave as competitive antagonists. They function by binding their physiologic receptors, Tie-1 and Tie-2. These are receptor tyrosine kinases, so named because they mediate cell signals by inducing the phosphorylation of key tyrosines, thus initiating cell signalling. It is somewhat controversial which of the Tie receptors mediate functional signals downstream of Ang stimulation. But it is clear that at least Tie-2 is capable of physiologic activation as a result of binding the angiopoietins.

Keywords

Zebrafish TIE-2 protein, Human Ig G1 protein; Angiopoietin receptor; TIE-2; TEK; TEK tyrosine kinase, endothelial; TIE2; VMCM; VMCM1; CD202B; angiopoietin-1 receptor; hTIE2; p140 TEK; soluble TIE2 variant 1; soluble TIE2 variant 2; endothelial tyro