Recombinant Human TEK Tyrosine Kinase, Endothelial, Fc-tagged

Cat. No. TEK-75H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Soluble TIE-2 fused with the Fc part of human IgG1 produced in baculovirus is a monomeric, glycosylated, polypeptide containing 730 amino acids and having a total molecular mass of 250 kDa. Human TIE-2/Fc monomer has a calculated molecular mass of approximately 125 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 140 kDa protein in SDS-PAGE under reducing conditions. The TIE2 Fc Chimera is purified by proprietary chromatographic techniques.
Species	Human
Source	Insect Cells
Description	TIE-1 (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. Human TIE-1 cDNA encodes a 1122 amino acid (aa) residue precursor protein with an 18 residue putative signal peptide, a 726 residue extracellular domain and a 353 residue cytoplasmic 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

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	antagonist for Ang1. Mice engineered to overexpress Ang2 or to lack Ang1 or Tie-1 display similar angiogenic defects.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	TIE-2 Fc Chimera was lyophilized from a concentrated (1 mg/ml) sterile solution containing 1x PBS.
Solubility	It is recommended to reconstitute the lyophilized TIE-2 Fc Chimera in sterile water not less than 100μg/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	Measured in a functional ELISA assay. When TIE-2/Fc is immobilized at 4 μg/mL (100 μl/well), it binds rh Angiopoietin-2 with a linear range of 2 -100 ng/ml.
Storage	Lyophilized sTIE-2 although stable at room temperature for 3 weeks, should be stored desiccated below -18℃. Upon reconstitution TIE-2 should be stored at 4℃between 2-7 days and for future use below -18℃. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	TEK TEK tyrosine kinase, endothelial [Homo sapiens]
Synonyms	TEK; TEK tyrosine kinase, endothelial; TIE2; VMCM; TIE-2; VMCM1; CD202B; soluble TIE2 variant 1; soluble TIE2 variant 2; EC 2.7.10.1; venous malformations, multiple cutaneous and mucosal; CD202b; hTIE2; Tyrosine-protein kinase receptor TIE-2; Tyrosine-protein kinase receptor TEK; Tunica interna endothelial cell kinase; p140 TEK; VMCM1; CD202b antigen

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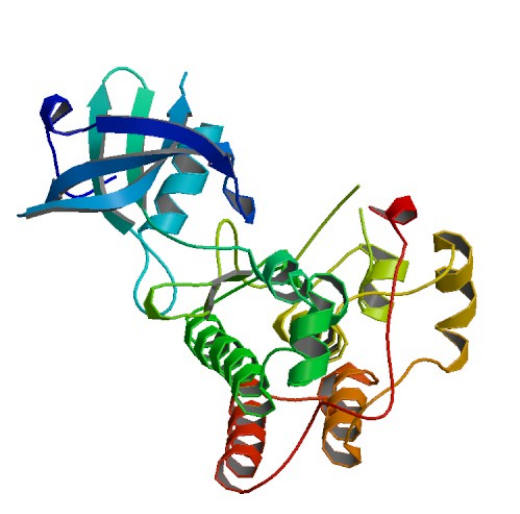
Gene ID	7010
mRNA Refseq	NM_000459
Protein Refseq	NP_000450
MIM	600221
UniProt ID	Q02763
Chromosome Location	9p21
Pathway	Hemostasis; Signaling in Immune system
Function	ATP binding; nucleotide binding; protein binding; receptor activity; transferase activity; transmembrane receptor protein tyrosine kinase activity
PDB rendering based on 1fvr.	

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