Recombinant Human TEK Tyrosine Kinase, Endothelial

Cat. No. TEK-1311H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant humanTEK monomer has a calculated molecular mass of approximately 105 kDa, but asa result of glycosylation, the monomer migrates as an approximately 125 kDaprotein in SDS-PAGE under reducing conditions.
Species	Human
Source	Insect Cells
Description	The molecularweight of the dimer is 250 kDa. The soluble receptor protein consists of thefull extracellular domain (Met1-Val730). TIE-1 (tyrosine kinase with Ig andEGF homology domains 1) and TIE2/TEK comprise a receptor tyrosine kinase(RTK) subfamily with unique structural characteristics: twoimmunoglobulin-like domains flanking three epidermal growth factor (EGF)-likedomains and followed by three fibronectin type III-like repeats in theextracellular region and a split tyrosine kinase domain in the cytoplasmicregion. These receptors are expressed primarily on endothelial andhematopoietic progenitor cells and play critical roles in angiogenesis,vasculogenesis and hematopoiesis. Human TIE2 cDNA encodes a 1124 amino acidresidue precursor protein with an 18 residue putative signal peptide, a 727residue extracellular domain and a 354 residue cytoplasmic domain. Twoligands, angiopoietin 1 and angiopoietin 2, which bind TIE2 withhigh-affinity have been identified.
Molecule Weight	250 kDa glycosylateddimer

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Form	Lyophilized from PBS
Purity	> 90% asdetermined by SDS-PAGE and visualized by silver stain
Endotoxin Level	< 0.1 ng/μg ofsTIE2/Fc
Biological Activity	Measuredin a functional ELISA assay. When TIE2/Fc is immobilized at 4 μg/ml(100ul/well), it binds recombinant human Angiopoietin 2 with a linear rangeof 2-100 ng/ml.
OfficialSymbol	TEK
Pathways	Angiogenesis;Angiopoietin receptor Tie2-mediated signaling; Cell surface interactions atthe vascular wall; Hemostasis; Rheumatoid arthritis; Tie2 Signaling

GENE INFORMATION

Gene Name	TEK TEK tyrosine kinase,endothelial [Homo sapiens]
Synonyms	TEK; TEK tyrosinekinase, endothelial; TIE2; VMCM; TIE-2; VMCM1; CD202B; angiopoietin-1receptor; hTIE2; p140 TEK; OTTHUMP00000021167; OTTHUMP00000227067;OTTHUMP00000227068; OTTHUMP00000227069; soluble TIE2 variant 1; soluble TIE2variant 2; tyrosine-protein kinase receptor TEK; tunica interna endothelialcell kinase; tyrosine-protein kinase receptor TIE-2; EC 2.7.10.1
Gene ID	7010
mRNA Refseq	NM_000459
Protein Refseq	NP_000450

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MIM	600221
UniProt ID	Q02763
Chromosome Location	9p21
Function	ATP binding;nucleotide binding; protein binding; protein kinase activity; proteintyrosine kinase activity; receptor activity; transmembrane receptor proteintyrosine kinase activity
PDB rendering basedon 1fvr.	

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