

Recombinant Human TEK Tyrosine Kinase, Endothelial

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

SPECIFICATION

Product Overview Recombinant human TEK monomer has a calculated molecular mass of approximately 105 kDa, but as a result of glycosylation, the monomer migrates as an approximately 125 kDa protein in SDS-PAGE under reducing conditions.

Species Human

Source Insect Cells

Description The molecular weight of the dimer is 250 kDa. The soluble receptor protein consists of the full extracellular domain (Met1-Val730). TIE-1 (tyrosine kinase with Ig and EGF homology domains 1) and TIE2/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 TIE2 cDNA encodes a 1124 amino acid residue precursor protein with an 18 residue putative signal peptide, a 727 residue extracellular domain and a 354 residue cytoplasmic domain. Two ligands, angiopoietin 1 and angiopoietin 2, which bind TIE2 with high-affinity have been identified.

Molecule Weight 250 kDa glycosylated dimer

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Form	Lyophilized from PBS
Purity	> 90% as determined by SDS-PAGE and visualized by silver stain
Endotoxin Level	< 0.1 ng/g of sTIE2/Fc
Biological Activity	Measured in a functional ELISA assay. When TIE2/Fc is immobilized at 4 µg/ml (100ul/well), it binds recombinant human Angiopoietin 2 with a linear range of 2-100 ng/ml.
Official Symbol	TEK
Pathways	Angiogenesis; Angiopoietin receptor Tie2-mediated signaling; Cell surface interactions at the vascular wall; Hemostasis; Rheumatoid arthritis; Tie2 Signaling

GENE INFORMATION

Gene Name	TEK TEK tyrosine kinase, endothelial [Homo sapiens]
Synonyms	TEK; TEK tyrosine kinase, endothelial; TIE2; VMCM; TIE-2; VMCM1; CD202B; angiopoietin-1 receptor; hTIE2; p140 TEK; OTTHUMP0000021167; OTTHUMP00000227067; OTTHUMP00000227068; OTTHUMP00000227069; soluble TIE2 variant 1; soluble TIE2 variant 2; tyrosine-protein kinase receptor TEK; tunica interna endothelial cell 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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