

TEK

Recombinant Human TEK Tyrosine Endothelial Kinase/TIE2 (aa 771-1124) Active GST-His

Catalog No.	CSI12295	Quantity:	50 µg
Alternate Names:	CD202B, TIE-2, TIE2, VMCM, VMCM1, soluble TIE2 variant 1, soluble TIE2 variant 2		
Description:	Human TIE2, C-terminal fragment, amino acids Q₇₇₁-A₁₁₂₄ (as in NCBI/Protein entry NP_000450.1), N-terminal GST-HIS₆ fusion protein with a 3C cleavage site, expressed in Sf9 insect cells. The TEK receptor tyrosine kinase is expressed almost exclusively in endothelial cells in mice, rats, and humans. This receptor possesses a unique extracellular domain containing 2 immunoglobulin-like loops separated by 3 epidermal growth factor-like repeats that are connected to 3 fibronectin type III-like repeats. The ligand for the receptor is angiopoietin-1. Defects in TEK are associated with inherited venous malformations; the TEK signaling pathway appears to be critical for endothelial cell-smooth muscle cell communication in venous morphogenesis. TEK is closely related to the TIE1 receptor tyrosine kinase.		
Concentration:	0.143 µg/µl		
Gene ID:	7010		
Protein Accession No:	NP_000450.1		
Source:	Baculovirus infected Sf9 cells		
Molecular Weight:	Theoretical MW _{Fusion Protein} : 68,979 Da		
Formulation:	50 mM HEPES, pH 7.5 + 100 mM NaCl + 5 mM DTT + 15 mM reduced glutathione, 20% glycerol		
Purification:	GST-Affinity Chromatography		
Product Identity:	TIE2 wt was confirmed as TIE2 by mass spectroscopy LC-ESI-MS/MS		
Activation:	<i>in vitro</i> autoactivation		
Specific Activity:	97 pmol/µg×min ATP-K _M : 2.2 µM		



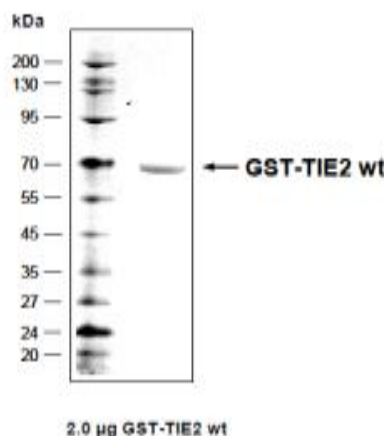
Method for determination of K_m value and specific activity:

- Assay conditions:
60 mM HEPES-NaOH, pH 7.5
3 mM $MgCl_2$
3 mM $MnCl_2$
3 μM Na-orthovanadate
1.2 mM DTT
50 μg / ml PEG_{20,000}
ATP (variable)
Substrate: Poly(Ala,Glu,Lys,Tyr)_{6:2:5:1}
(Sigma P-1152), 40 μg / ml
TIE2 wt: 1.0 μg / ml
- Filter binding assay
MSFC membrane (Millipore)

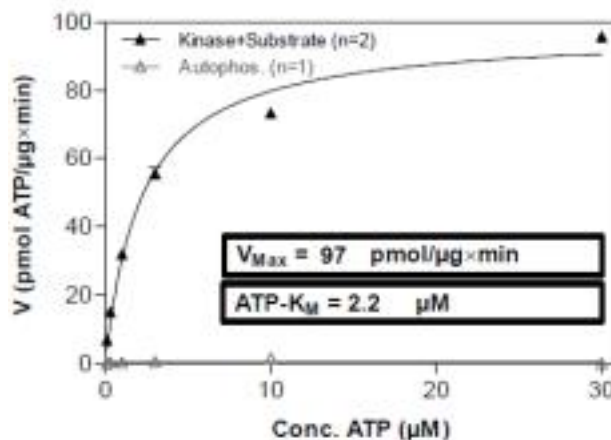
Amino Acid Sequence: MSPILGYWKI KGLVQPTRL LLEYLEEKYEE HLYERDEGDK WRNKKFELGL
EFPNLPYYID GDVKLTQSMA IIRYIADKHN MLGGCPKERA EISMLEGAVL
DIRYGVSRIA YSKDFETLKV DFLSKLPEML KMFEDRLCHK TYLNGDHVTH
PDFMLYDALD VVLYMDPMCL DAFPKLVCFK KRIEAIQID KYLKSSKYIA
WPLQGWQATF GGGDHPPKSD PMGHHHHHHG RDSLEVLFGG PLAMLQLKRA
NVQRRMAQAF QNVREPAVQ FNSGTLALNR KVKNNPDPTI YPVLWDNDIK
FQDVIGEGNF GQVLKARIKK DGLRMDAAIK RMKEYASKDD HRDFAGELEV
LCKLGHHPI INLLGACEHR GYLYLAIEYA PHGNLLDFLR KSRVLETDP
FAIANSTAST LSSQQLLHFA ADVARGMDYL SQKQFIHRDL AARNILVGEN
YVAKIADFGL SRGQEVYVKK TMGRLPVRWM AIESLNYSVY TTNSDVWSYG
VLLWEIVSLG GTPYCGMTCA ELYEKLPPQGY RLEKPLNCDD EVYDLMRQCW
REKPYERPSF AQILVSLNRM LEERKTYVNT TLYEKFTYAG IDCSAEEAA

Storage & Stability: Store in working aliquots at $-80^{\circ}C$. **Avoid repeated freeze-thaw cycles.**

TIE2 wt
Coomassie stain



Determination of K_m value for ATP:



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