Recombinant Mouse Tek Protein, Fc-tagged

Cat. No. Tek-7344M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Murine soluble TIE-2 (Val19-Leu740) fused with the Fc part of human IgG1 was expressed in CHO.
Species	Mouse
Source	CHO
Description	Tyrosine-protein kinase that acts as cell-surface receptor for ANGPT1, ANGPT2 and ANGPT4 and regulates angiogenesis, endothelial cell survival, proliferation, migration, adhesion and cell spreading, reorganization of the actin cytoskeleton, but also maintenance of vascular quiescence. Has anti-inflammatory effects by preventing the leakage of proinflammatory plasma proteins and leukocytes from blood vessels. Required for normal angiogenesis and heart development during embryogenesis. Required for post-natal hematopoiesis. After birth, activates or inhibits angiogenesis, depending on the context. Inhibits angiogenesis and promotes vascular stability in quiescent vessels, where endothelial cells have tight contacts. In quiescent vessels, ANGPT1 oligomers recruit TEK to cell-cell contacts, forming complexes with TEK molecules from adjoining cells, and this leads to preferential activation of phosphatidylinositol 3-kinase and the AKT1 signaling cascades. In migrating endothelial cells that lack cell-cell adhesions, ANGT1 recruits TEK to contacts with the extracellular matrix, leading to the formation of focal adhesion complexes, activation of PTK2/FAK and of the downstream kinases MAPK1/ERK2 and MAPK3/ERK1, and ultimately to the stimulation of sprouting angiogenesis. ANGPT1 signaling triggers receptor dimerization and autophosphorylation at specific

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	tyrosine residues that then serve as binding sites for scaffold proteins and effectors. Signaling is modulated by ANGPT2 that has lower affinity for TEK, can promote TEK autophosphorylation in the absence of ANGPT1, but inhibits ANGPT1-mediated signaling by competing for the same binding site. Signaling is also modulated by formation of heterodimers with TIE1, and by proteolytic processing that gives rise to a soluble TEK extracellular domain. The soluble extracellular domain modulates signaling by functioning as decoy receptor for angiopoietins. TEK phosphorylates DOK2, GRB7, GRB14, PIK3R1, SHC1 and TIE1.
Form	Lyophilized
Molecular Mass	280 kDa
AA Sequence	GAMDLILINSLPLVSDAETSLTCIASGWHPHEPITIGRDFEALMNQHQDPLEVTQDVT REWAKKVVWKREKASKINGAYFCEGRVRGQAIRIRTMKMRQQASFLPATLTMTVDR GDNVNISFKKVLIKEEDAVIYKNGSFIHSVPRHEVPDILEVHLPHAQPQDAGVYSARYI GGNLFTSAFTRLIVRRCEAQKWGPDCSRPCTTCKNNGVCHEDTGECICPPGFMGR TCEKACEPHTFGRTCKERCSGPEGCKSYVFCLPDPYGCSCATGWRGLQCNEACP SGYYGPDCKLRCHCTNEEICDRFQGCLCSQGWQGLQCEKEGRPRMTPQIEDLPDH IEVNSGKFNPICKASGWPLPTSEEMTLVKPDGTVLQPNDFNYTDRFSVAIFTVNRVL PPDSGVWVCSVNTVAGMVEKPFNISVKVLPEPLHAPNVIDTGHNFAIINISSEPYFGD GPIKSKKLFYKPVNQAWKYIEVTNEIFTLNYLEPRTDYELCVQLARPGEGGEGHPGP VRRFTTASIGLPPPRGLSLLPKSQTALNLTWQPIFTNSEDEFYVEVERRSLQTTSDQ QNIKVPGNLTSVLLSNLVPREQYTVRARVNTKAQGEWSEELRAWTLSDILPPQPENI KISNITDSTAMVSWTIVDGYSISSIIIRYKVQGKNEDQHIDVKIKNATVTQYQLKGLEPE TTYHVDIFAENNIGSSNPAFSHELRTLPHSPASADLGTRSDKTHTCPPCPAPELLGG PSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPRE EQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPMLDSDGSFFL YSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

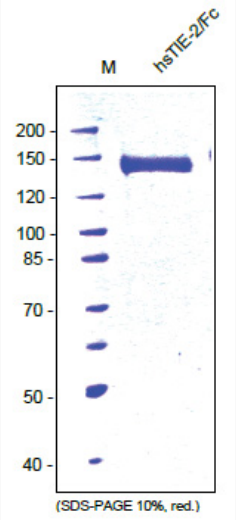
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Purity	> 90 % by SDS-PAGE and visualized by Silver stain
Stability	Shelf life: one year from despatch.
Storage	Store lyophilized at 2-8 centigrade for 6 months or at -20 centigrade long term. After reconstitution store the antibody undiluted at 2-8 centigrade for one month or (in aliquots) at -20 centigrade long term. Avoid repeated freezing and thawing.
Storage Buffer	PBS without stabilizers
Reconstitution	Restore in PBS to a concentration not lower than 50 µg/mL. The lyophilized sTIE-2/hFc is soluble in water and most aqueous buffers.

GENE INFORMATION

Gene Name	Tek TEK receptor tyrosine kinase [Mus musculus (house mouse)]
Official Symbol	Tek
Synonyms	Tek; TEK receptor tyrosine kinase; Hyk; Tie; STK1; Tie2; tie-; Tie-2; Cd202b; AA517024; angiopoietin-1 receptor; endothelial tyrosine kinase; endothelial-specific receptor tyrosine kinase; p140 TEK; tunica interna endothelial cell kinase; tyrosine kinase with Ig and EGF homology domains-2; tyrosine-protein kinase receptor TEK; tyrosine-protein kinase receptor TIE-2; EC 2.7.10.1
Gene ID	21687
mRNA Refseq	NM_001290549
Protein Refseq	NP_001277478

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UniProt ID	Q02858
SDS-PAGE	

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