



Recombinant Human soluble TIE-1/Fc Chimera



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no:	SFC-011
Size:	20 µg
Lot. No.:	According to product label
Country of origin:	Germany

Scientific Background

Gene:	<i>tie1</i>
Synonyms:	Tyrosine-protein kinase Tie-1

Recombinant human soluble TIE-1 was fused with the Fc part of human IgG1. The soluble receptor protein consists of the full extracellular domain (Met1-Glu749). The recombinant mature TIE-1/Fc is a disulfide-linked homodimeric protein. Human TIE-1/Fc monomer has a calculated molecular mass of approximately 105kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 125kDa protein in SDS-PAGE under reducing conditions. 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 1124 amino acid (aa) residue precursor protein with an 18 residue putative signal peptide, a 727 residue extracellular domain and a 354 residue cytoplasmic domain. Whereas two ligands have been described for TIE-2 [angiopoietin-1 (Ang1) and angiopoietin-2 (Ang2)], so far no ligand was found for TIE-1.

References

- Partanen J and DJ Dumont (1999) Curr Top Microbiol Immunol 237:159.
- Takakura N et al, (1998) Immunity 9:677.
- Procopio W et al, (1999) J Biol Chem 274:30196.
- Sato et al. (1993) PNAS 90:9355
- Gale et al., (1999) Gen Dev 13:1055

Sequence

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VDLTLLANLRLTDPQRFLLTCVSGEAGAGRGSDAWGPPLLEKDDRIVRTPP
GPPRLRLARNGSHQVTLRGRFSKPSDLVGVFSCVGGAGARRTRVIYVHNSPGAH
LLPDKVTHTVNKGDTAVLSARVHKEKQTDVVIWKSNGSYFYTLTDWHEAQDGRF
LLQLPNVQFPSSGIYSATYLEASPLGSAFFRLIVRGCGAGRWP GCTKECPG
CLHGGVCHDHDGECVCPGFTGTRCEQACREGRFQSQEQCPGISGCRGLT
FCLPDPYGCSCGSGWRGSSQCQEACAPGHFGADCR LQCQCQNGGTCDRFSGCV
CPSGWHGVHCEKSDRIPQILNMASELEFNLETMPRINCAAAGNPFVVRGSEI
LRKPDGTVLLSTKAIVEPEKTTAEFEVPRVLVADSGFWECRVSTSGGQDSRR
FKVNVKVPVPLAAPRLLTQSRQLVVSPLVVSFSGDGP ISTVRLHYRPQDST
MDWSTIVVDPSENVTLMLNLRPKTGYSVRVQLSRPGE GEGGAWGPPTLMTDC
PEPLLQPWLEGWHEVETDRLRVSWSLPLVPGPLVGDGFLRLRLWDGTRGQERR
ENVSSPQARTALLTGLTPGTHYQLDVQLYHCTLLGPA SPPAHVLLPSPGPPA
PRHLHAQALSDSEIQLTWKHPEALPGPISKYVVEVQVAGGAGDPLWIDVDRP
EETSTIIRGLNASTRYLFRMRASIQGLDWSNTEVEE STLGNGLQAEQVQET
RSDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHED
PEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDNLNGKEYKCK
VSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYF
SDIAVEVESNGQPENNYKTPPMLDSDGSFFLYSKLTVDKSRWQQGNVFSCS
VMHEALHNHYTQKLSLSLSPGK
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Database References

Protein RefSeq:	NP_005415
Uniprot ID:	P35590
mRNA RefSeq:	NM_005424

Product Specifications

Expressed in	Insect cells
Purity	> 90% by SDS-PAGE
Buffer	PBS
Stabilizer	None
Formulation	lyophilized
Length (aa):	957
MW:	240 kDa Dimer
Result by N-terminal sequencing	VDLTLA

Stability: Lyophilized samples are stable for greater than six months at -20°C to -70°C. Reconstituted sTIE-1/Fc should be stored in working aliquots at -20°C.

Reconstitution: The lyophilized sTIE-1/Fc is soluble in water and most aqueous buffers and should be reconstituted in PBS or medium to a concentration not lower than 50µg/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Bioassay data are not available.



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Handling/Application

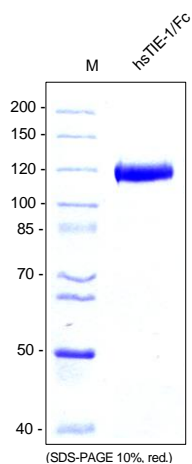


Fig. 1: SDS-PAGE analysis of recombinant human soluble TIE-1/Fc produced in insect cells. Sample was loaded in 10% SDS-polyacrylamide gel under reducing condition and stained with Coomassie blue.