



# Recombinant Mouse soluble TIE-2/Fc Chimera



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no:</b>	<b>SFC-033</b>
<b>Size:</b>	20 µg
<b>Lot. No.:</b>	According to product label
<b>Country of origin:</b>	Germany

## Scientific Background

<b>Gene:</b>	<i>tek</i>
<b>Synonyms:</b>	Tyrosine-protein kinase Tie-2, Angiotensin-1 receptor

Recombinant murine soluble TIE-2 was fused with the Fc part of human IgG<sub>1</sub>. The recombinant mature sTIE-2/Fc is a disulfide-linked homodimeric protein. The sTIE-2/Fc monomers have a mass of approximately 105kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 140kDa protein in SDS-PAGE under reducing conditions.

The soluble receptor protein consists of the full extracellular domain (Val19-Leu740). 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 1122 amino acid (aa) residue precursor protein with an 18 residue putative signal peptide, a 726 residue extracellular domain and a 353 residue cytoplasmic domain. Two ligands, angiopoietin-1 (Ang1) and angiopoietin-2 (Ang2), which bind TIE-2 with high-affinity have been identified. Ang2 has been reported to act as an antagonist for Ang1.

Mice engineered to overexpress Ang2 or to lack Ang1 or Tie-1 display similar angiogenic defects.

## 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

```
GAMDLLILNSLPLVSDAETSLTCIASGWHPEPITIGRDFEALMNQHQPDL
VTQDVTREWAKKVVWKREKASKINGAYFCEGRVGRQAIRIRTMKMRQQASFL
PATLMTVDRGDNVNISFKKVLKEEDAVIYKNGSFIHSVPRHEVPDILEVH
LPHAQPQDAGVYSARYIGGNLFTSAFTRLIVRCEAQKWPDCSRPCTTCKN
NGVCHEDTGEICPPGFMGRTEKACEPHTFGRTEKERCSCGPEGCKSYVFL
PDPYGCSCATGWRGLQCNEACPSGGYGPDCCKLRCHCTNEEICDRFQGCCLC
SQGWQGLQCEKEGRPRMTPQIEDLPHIEVNSGKFNPICKASGWPLPTSEMTL
VKPDGTVLQPNDFNYTDRFSVAIFTVNRVLPDPDSGVVWCVSNTVAGMVEKPF
NISVKVLEPELHAPNVIDTGHNFAINISSEPFYFGDGPICKSKLKYKPNQA
WKYIEVTNEIFTLNYLEPRTDYELCVQLARPGEGEGHGPVRRFTTASIGL
PPRGLSLLPKSQTALNLTWQPIFTNSEDFYVEVERSLQTTSDQQNIKVP
GNLTSVLLSNLVPREQYTVRARVNTKAQGEWSEELRAWLTSDDLPPQENIK
ISNITDSTAMVSWTIVDGYSSISLIIIRYKVGKNEQDHIQVKKIKNATVTQYQ
LKGLEPETTYHVDIFAENNISSNPAFSELRLPHSPASADLGRSDKTHHT
CPCCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNW
YVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALP
APIEKTIISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEW
ESNGQPENNYKTTTPMLDSDGSSFFLYSKLTVDKSRWQQGNVFCSSVMHEALH
NHYTQKSLSLSPGK
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## Database References

<b>Protein RefSeq:</b>	NP_038718
<b>Uniprot ID:</b>	B1AWS8
<b>mRNA RefSeq:</b>	NM_013690

## Product Specifications

	Wählen Sie ein Element aus.
<b>Expressed in</b>	CHO cells
<b>Purity</b>	> 90% by SDS-PAGE & silver stain
<b>Buffer</b>	PBS
<b>Stabilizer</b>	None
<b>Formulation</b>	lyophilized
<b>Length (aa):</b>	950
<b>MW:</b>	280 kDa (Dimer)

**Stability:** Lyophilized samples are stable for greater than six months at -20°C to -70°C. Reconstituted sTIE-2/hFc should be stored in working aliquots at -20°C.

**Reconstitution:** The lyophilized sTIE-2/hFc is soluble in water and most aqueous buffers and should be reconstituted in PBS to a concentration not lower than 50µg/ml.



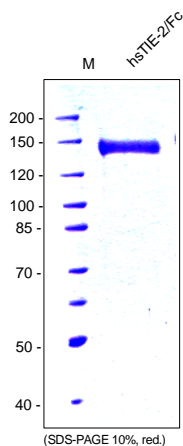
**AVOID REPEATED FREEZE AND THAW CYCLES!**

**Biological Activity:** Not tested so far!



# Recombinant Mouse soluble TIE-2/Fc Chimera

## Handling/Application



**Fig. 1:** SDS-PAGE analysis of recombinant mouse soluble TIE-2/Fc produced in CHO cells. Sample was loaded in 10% SDS-polyacrylamide gel under reducing condition and stained with Coomassie blue.