



Anti-human TIE-1 (#6F12)

20140701BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	101-M48
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Monoclonals were produced with the help of BALB/c mice using recombinant human soluble extracellular domain of TIE-1.

Target Background

Synonyms:	Tyrosine-protein kinase Tie-1
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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

Database References Antigen

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

Product Specifications

Species reactivity	human
Clone/Ab feature	IgG ₁ ; #6F12
Cross reactivity	ND
Host	mouse
Clonality	monoclonal
Purification	Protein G purified
Immunogen	recombinant human soluble TIE-1
Formulation	lyophilized
Buffer	PBS

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.

 **AVOID REPEATED FREEZE AND THAW CYCLES!**

Specificity: The monoclonal antibody will detect native human TIE-1 in ELISA experiments and on the surface of different human cell types.

Applications

Western Blot:	Use at 2-5 µg/ml
ELISA:	Use at 1-10 µg/ml
FACS	Use at 1-5 µg/ml

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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Handling/Applications

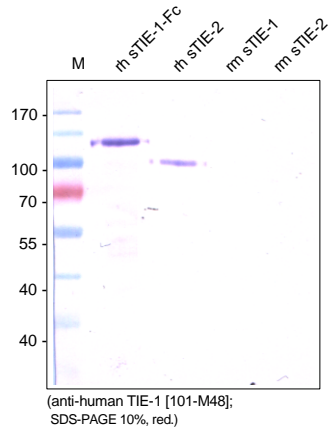


Figure 1: Western analysis of recombinant human and mouse soluble TIE receptors using a monoclonal antibody directed against human recombinant soluble TIE-1. There is a weak cross reactivity with human sTIE-2 but no with mouse sTIE-1 and sTIE-2 visible.

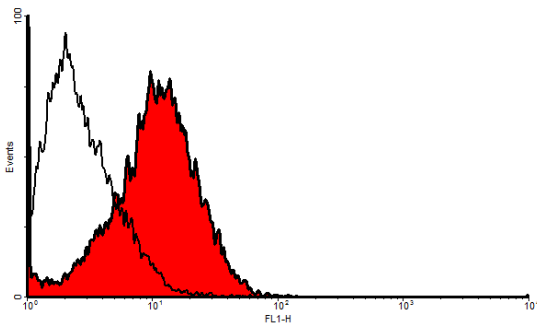


Figure 2: FACS analysis with primary human umbilical vein endothelial cells (HUVEC).