



Anti-human TIE-2-Biotin (#tek9)

20140404BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	101-MBi52
Size:	50 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Monoclonal antibodies were produced with the help of BALB/c mice using recombinant human soluble extracellular domain of TIE-2.

Target Background

Synonyms:	Tyrosine kinase with Ig and EGF homology domain-2
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Recombinant human soluble TIE-2/Tek was fused with the Fc part of human IgG1. The recombinant mature sTIE-2/Fc is a disulfide-linked homodimeric protein. The sTIE-2/Fc monomers have a mass of approximately 125 kDa. The soluble receptor protein consists of the full extracellular domain (Met1-Val730). 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-2 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. 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-2 display similar angiogenic defects. T

References

1. Reusch et al., Angiogenesis 4:123, 2001
2. Harris et al., Clin Cancer Res. 7 :1992, 2001
3. Partanen J and DJ Dumont (1999) Curr Top Microbiol Immunol 237:159.
4. Takakura N et al, (1998) Immunity 9:677.
5. Procopio W et al, (1999) J Biol Chem 274:30196.
6. Sato et al. (1993) PNAS 90:9355
7. Gale et al., (1999) Gen Dev 13:1055
8. Van Hoof et al, J Proteome Res 9:1610, 2010

Database References Antigen

Protein RefSeq:	NP_000450.2
Uniprot ID:	Q02763
mRNA RefSeq:	NM_000459.3

Product Specifications

Species reactivity	human
Clone/Ab feature	IgG ₁ ; tek9
Host	mouse
Clonality	monoclonal
Purification	Protein G purified
Immunogen	recombinant human soluble TIE-2
Formulation	lyophilized
Buffer/Stabilizer	PBS; 50X BSA
Preservative	0,02% sodium azide
Conjugation	Biotin

Warnings: Reagents contain sodium azide. Under acidic conditions sodium azide yields hydrazoic acid, this is extremely toxic. Azide compounds should be diluted with running water before discarding. These precautions are recommended to avoid deposits in plumbing where explosive condition may develop.

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 unconjugated monoclonal antibody will detect native human TIE-2/tek in ELISA experiments and on the surface of different human cell types.

Applications

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

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



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Handling/Applications

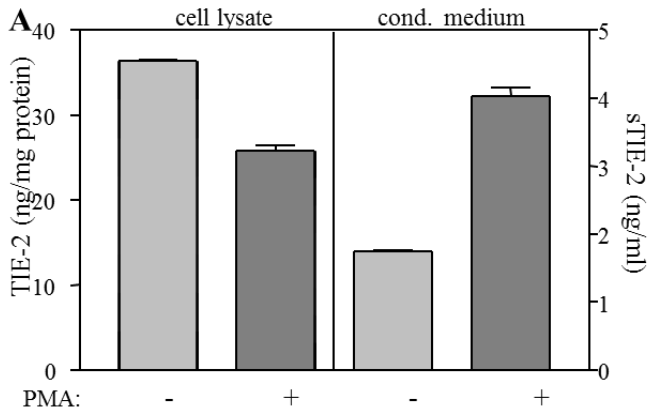


Figure 1: Quantification of soluble and cellular TIE-2 by sandwich ELISA. A. CM and cell lysates from HUVECs treated with PMA (25ng/ml) or left untreated were analysed by Sandwich ELISA for the concentrations of sTIE-2 or TIE-2. For capturing anti-human TIE-2 Cl.16 [#101-M54] was used, for the detection a mixture of biotinylated anti-human TIE-2 Cl. 2 [#101-M50] and Cl.9 [#101-M52].

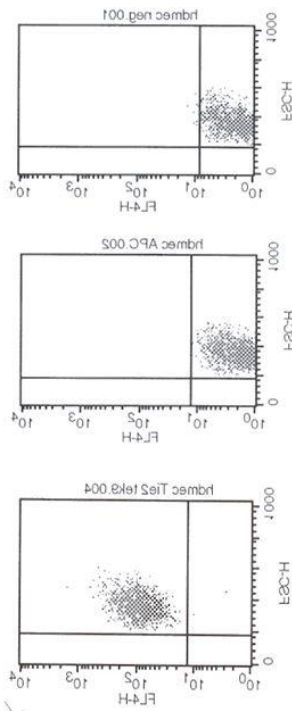


Figure 2: FACS analysis with human dermal microvascular endothelial cells (HDMVEC).