

Product Specification Sheet

**Tyrosine Protein Kinase Receptor (TIE-2) Antibodies**

<b>Cat.</b> TIE23-M	Mouse monoclonal Anti-Human Tie-2 protein IgG <b>FORM:</b> Soln Lyophilized	<b>SIZE:</b> 100 ug
<b>Cat.</b> TIE22-C	Recombinant Human Tie-2 protein for WB <b>FORM:</b> Soln Lyophilized	<b>SIZE:</b> 100 ul

Embryonic vascular system undergoes a series of complex, highly regulated series of events involving differentiation, migration and association of primitive endothelial cells. This process is termed vasculogenesis. A further remodeling of the primitive vascular system forms the mature cardiovascular system. This process is known as angiogenesis (sprouting of new capillary vessels from pre-existing vasculature). A family of receptor tyrosine kinases **TIE1 and TIE 2** or Tek has been identified in vascular endothelium and hematopoietic cells. Mice lacking TIE 1 or TIE 2 are lethal. Ties may represent the earliest endothelial cell lineage marker and may regulate the endothelial cell proliferation, differentiation, and proper patterning during vasculogenesis. TIEs appear to be acting downstream of the VEGFRs. Tie-1 (human 1138 AA; mouse 1134 aa) is a type 1 membrane receptor protein specifically expressed in developing vascular endothelial cells. Tie-1 extracellular portion (25-279 aa) contains 3 fibronectin type III-like and 2 Ig-like C2-type, and 3-EGF-like domains.

**Source of Antigen and Antibodies**

<b>Antigen</b>	Recombinant human Tie-2 protein EC domain
<b>Location</b>	EC-domain
<b>Ab Host/type</b>	Mouse, monoclonal IgG1
<b>Ab Format</b>	Protein A/G pure IgG ( <b>cat #TIE23-M</b> )

Recombinant human Tie-2 protein (23-744 aa, EC domain) was expressed as His-tagged Fc protein Chimera and purified (>90%). **For WB +ve control, Cat # TIE22-C**, is formulated in SDS-PAGE sample buffer (reduced). This preparation is not biologically **inactive**. It is not suitable for ELISA or other applications where native protein is required. It is supplied in 100 ul/vial. For WB, heat once and load 10 ul/lane and visualize with appropriate antibodies. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the control solution prior to heating and loading on gels.

This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Store frozen in suitable aliquots. Do not freeze, thaw, or heat repeatedly.

**Form & Storage of Antibodies/Peptide Control**

**Affinity pure IgG**

100 ug/100ul solution	50 ug/50 ul lyophilized powder
Buffer: PBS pH 7.4	
<b>Reconstitute</b> in the original vol. of water	

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting** (1-3 ug/ml using Chemiluminescence technique). NIH/3T3 cells can be used as positive control. Tie-1 ~135-140 kDa. Recombinant Tie-1 fusion protein migrate as 130-140 kDa due to glycosylation.

**ELISA** (1:10K-1:100K; using 50-100 ng of control peptide/well).

**Histochemistry & Immunofluorescence:** Not tested. We recommend antibody at 25 ug/ml in paraffin sections.

**Specificity & Cross-reactivity**

Human TIE23-M reacts with human Tie-2. No significant sequence homology is seen with Tie-1. Antibody crossreactivity in various species is not established. Recombinant purified human Tie-1 protein chimera (Cat # TIE23-C) is available for control studies.

**General References:** (1) Partenen J et al (1992) Mol. Cell. Biol. 12, 1698; Sato TN et al (1993) PNAS 90, 12056; Iwama A et al (1993) BBRC 195, 301; Korhonen J et al (1995) Blood 86, 1828; deVries C et al (1992) Science 255, 989.

*\*This product is for in vitro research use only.*

**Related materials available from ADI**

Antibodies to Ang-1, Ang-2, Tie-1, Tie-2, Recombinant Mouse and Human VEGFs, Anti-flk-1, Flt-1, and Flt-4 (VEGFRs 1-3)

**Western Blot recycling kit** (Use the same blot to probe with multiple antibodies Ang-1 and Ang-2, etc.) **recycle blot at room temp in 5-10 min;** No mercaptoethanol or heating required).

TIE23-M 40722A

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