

Product Specification Sheet

Tyrosine Protein Kinase Receptor/Tunica internal endothelial cell kinase (TIE-1) Antibodies

Cat. TIE11-A	Rabbit Anti-Human Tie-1 IgG # 1(aff pure)	SIZE: 100 ug
Cat. TIE11-P	Human Tie-1 Control/blocking peptide	SIZE: 100 ug

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.

Function: Probable protein tyrosine-kinase transmembrane receptor.

Subcellular Location: Membrane; Single-pass type I membrane protein.

Similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family. Tie subfamily

Protein name Tyrosine-protein kinase receptor Tie-1 [Precursor]

Synonym EC 2.7.10.1

Gene name Name: TIE1; Synonyms: TIE

Source of Antigen and Antibodies

Antigen	20aa peptide of Human TIE1 ; (protein accession #P35590 , refs 1) Designated (TIE11-P or control peptide/blocking peptide) conjugated to KLH; Epitope location ~ C-terminus, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal Aff pure IgG, (Cat # TIE11-A) purified over the antigen column
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in **Buffer:** PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20°C and powder at 4°C or -20°C..

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

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1-10 ug/ml for affinity pure using Chemiluminescence's technique). NIH/3T3 cells can be used as positive control. Tie-1 ~135-140 kDa.

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

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in formaldehyde fixed tissue.

Specificity & Cross-reactivity

Human TIE11-P is 100% conserved in mouse, and bovine. Antibody crossreactivity in various species is not established. The Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity

General References: (1) Partenen J et al (1992) Mol. Cell. Biol. 12, 1698-1707; Sato TN et al (1993) PNAS 90, 12056; Iwama A et al (1993) BBRC 195, 301-309; Korhonen J et al (1995) Blood 86, 1828-1835; deVries C et al (1992) Science 255, 989-991.

*This product is for in vitro research use only.

Related material 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).

TIE11-A-P

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