Human Tie-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF619

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Tie-1 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse Tie-1 is observed and less than 1% cross-reactivity with recombinant human Tie-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Tie-1 Ala22-Gln760 Accession # P35590
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

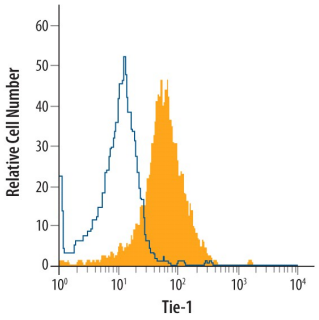
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Tie-1 Fc Chimera (Catalog # 619-TI)
Flow Cytometry	2.5 µg/10^6 cells	See Below
Immunohistochemistry	5-15 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

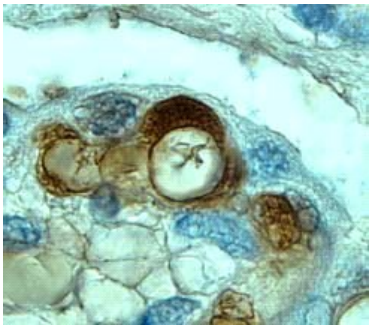
DATA

Flow Cytometry



Detection of Tie-1 in HUVEC Human Cells by Flow Cytometry. HUVEC human umbilical vein endothelial cells were stained with Goat Anti-Human Tie-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF619, filled histogram) or control antibody (Catalog # AB-108-C, open histogram), followed by Phycoerythrin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0107).

Immunohistochemistry



Tie-1 in Human Placenta. Tie-1 was detected in immersion fixed paraffin-embedded sections of human placenta using 8 µg/mL Goat Anti-Human Tie-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF619) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Tie-1/Tie (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 1138 amino acid (aa) residue precursor protein with a 24 residue putative signal peptide, a 735 residue extracellular domain and a 354 residue cytoplasmic domain. Ligands which bind and activate Tie-1 have not been identified. Based on gene-targeting studies, the *in vivo* functions of Tie-1 have been shown to be related to endothelial cell differentiation and the maintenance of integrity of the endothelium.

References:

1. Partanen, J. and D.J. Dumont (1999) Curr. Top. Microbiol. Immunol. **237**:159
2. Sato, T.N. *et al.* (1995) Nature **376**:70

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