

FLT-1/VEGFR1/FLK-2 Antibodies

Cat. FLT11-A	Rabbit Anti-Human FLT-1 IgG # 1 (aff pure)	SIZE: 100 ug
Cat. FLT11-P	Human FLT-1 Control/blocking peptide # 1	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). Study of tumor angiogenesis has led to the identification of several proteins including basic fibroblast growth factor (bFGF) and vascular endothelial growth factor. VEGF acts by interacting with a family of largely endothelial-specific receptor tyrosine kinases that includes VEGFR-1 (flt-1/flk-2), VEGFR-2 (flk-1/KDR), and VEGFR-3/Flt-4. Disruption of VEGFRs interferes with differentiation of endothelial cells and it is lethal for the embryo.

FLT-1 (fms-like tyrosine kinase or VEGF-R1; human 1338 aa; rat 1336 aa, and mouse 1330aa), a putative receptor protein tyrosine kinase, is a receptor for VEGF and PLGF. It is type 1 membrane protein. It is expressed in normal lung, placenta, liver, kidney, heart, and brain but not in tumor

Protein name Vascular endothelial growth factor receptor 1; Synonyms EC 2.7.10.1; VEGFR-1; Vascular permeability factor receptor; Tyrosine-protein kinase receptor FLT, Flt-1, Tyrosine-protein kinase FRT, Fms-like tyrosine kinase 1, Gene name Name: FLT1, FRT

Source of Antigen and Antibodies

Antigen	17aa peptide of Human FLT1 (protein accession #P17948, refs 1; Designated (FLT11-P or control peptide) conjugated to KLH, Epitope location~ C-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, polyclonal Aff pure IgG1 (cat #FLT11-A) purified over antigen-agarose column
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 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 -20OC and powder at 4oC or -20oC..
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 (1-10 ug/ml for affinity pure using Chemiluminescence technique). Human recombinant baculovirus expressed FLT-1 is approx. 166-200 kDa. (refs 2)

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

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

Specificity & Cross-reactivity

Human FLT11-P is 83% conserved in mouse and rat FLT-1. No significant sequence homology is seen with human FLK-1 or other related kinases. 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 (a detailed protocol is available at our web-site).

General References: (1) Shibuya Me tal (1990) Oncogene 5, 519; Matsushima H et al (1987) Jpn. J Cancer Res. 78, 655; Yamane A et al (1994) Oncogene 9, 2683; Finnerty H et al (1993) Oncogene 8, 2293; Choi k et al (1994) Oncogene 9, 1261; Plouet J et al (1989) EMBO J 8, 3801; Simon M et al (1998) J Am. Soc. Nephrol. Vol. 9 1032; Sait SN et al (1995) Cytogenet. Cell Genet. 70, 145; deVries C et al (1992) Science 255, 989.

(2) Citations of ADI's Antibodies for VEGFR1

Mayr-wohlfart U, 2002, Bone 30, 472-477, WB, human bone
 Kitajima, 2004, Fertility and Sterility, 81, 842-849, WB, rat ovary
 Hosford GE, 2003, Am J Physiol Lung Cell Mol Physiol 285: L161-L168, WB, rat lung
**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)

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