

Product Specification Sheet

Human FLT-1/VEGFR1 Antibodies

Cat. FLT12-M Mouse Monoclonal Anti-Human FLT-1 IgG, aff pure **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. 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 1333), a putative receptor protein tyrosine kinase, is a receptor for VEGF and PLGF. Mature full length protein is 27-1338 aa (EC domain 27-758 aa). It is type 1 membrane protein and also exist as soluble protein. FLT-1 region 657-687 aa (DQEAPYLLRNLS DHTVAISSSTLLDCHANGV GEHCNK) is changed to KAVFSRISKFKSTRNDCTTQSNVKH in soluble FLT-1. Additional isoforms seem to exist as well. Mostly in normal lung, but also in placenta, liver, kidney, heart and brain tissues. Specifically expressed in most of the vascular endothelial cells, and also expressed in peripheral blood monocytes. It is not expressed in tumor cell lines. Soluble Isoform (sFlt1) is strongly expressed in placenta.

Source of Antigen and Antibodies

Antigen	Recombinant human FLT1/VEGFR1 protein EC-domain (27-758 aa)
Ab Host/type	Mouse, monoclonal IgG1 Aff pure IgG (cat #FLT12-M)
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Monoclonal IgG

100 ug/vial solution
50 ug/vial lyophilized powder
PBS and 5% Trehalose
Reconstitute powder in the original vol. of water

Storage

Short-term: unopened, undiluted liquid vials for less than a week at 4oC and powder 3-6 months.

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 0.5-2 ug/ml. Human recombinant baculovirus expressed FLT-1 is approx. 166-200 kDa.

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

Histochemistry & Immunofluorescence: We recommend the use of affinity purified antibody at 10-20 ug/ml frozen sections.

Flow Cytometry: Dilute the antibody to 25 ug/ml and use 10-20 ul antibody for 1-2 x 10⁵ cells in a total volume of 200-250 ul. Visualize with appropriate secondary antibodies.

Specificity & Cross-reactivity

Human FLT12-M has no crossreactivity with mouse FLT-1 or human VEGFR2-4. Antibody crossreactivity in various species is not established.

General References: (1) Shibuya Me tal (1990) Oncogene 5, 519-524; Matsushime H et al (1987) Jpn. J Cancer Res. 78, 655-661; Yamane A et al (1994) Oncogene 9, 2683-2690; Finnerty H et al (1993) Oncogene 8, 2293-2298; Choi k et al (1994) Oncogene 9, 1261-1266; Plouet J et al (1989) EMBO J 8, 3801; Simon m et al (1998) J Am. Soc. Nephrol. Vol. 9 (in press); 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 FLT-1/VEGFR1 (see web site for updated list)

Hosford GE, 2003, Am J Physiol Lung Cell Mol Physiol 285: L161-L168, WB, rat lung
Kitajima, 2004, Fertility and Sterility, 81, 842-849, WB, rat ovary

**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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