

**DM3507****Monoclonal Antibody to VEGFR-1 / Flt-1 - Purified****Alternate names:**

FLT, FLT1, FRT, Fms-like tyrosine kinase 1, Tyrosine-protein kinase FRT, Tyrosine-protein kinase receptor FLT, VEGF Receptor 1, VEGFR1, Vascular endothelial growth factor receptor 1, Vascular permeability factor receptor

**Quantity:**

0.1 mg

**Background:**

VEGF Receptor 1 (also known as FLT) belongs to the src gene family and shows tyrosine protein kinase activity that is important for the control of cell proliferation and differentiation. The protein acts as a receptor for VEGF, VEGFB and PGF. An alternatively spliced form of the gene produces a soluble protein (sFlt1) which binds vascular endothelial growth factor (VEGF) with high affinity. sFlt1 has a higher affinity for VEGF indicating that it may function as an inhibitor in the VEGF response. VEGF Receptor 1 is specifically expressed in most vascular endothelial cells and peripheral blood monocytes. VEGF and its high-affinity binding receptors, the tyrosine kinases FLK1 and FLT1, are thought to be important for the development of embryonic vasculature. It has been shown that an alternately spliced form of FLT1 produces a soluble protein, termed sFLT1, which binds vascular endothelial growth factor with high affinity. Because sFLT1 has a higher affinity for VEGF than does FLK1, it may function as an inhibitor of VEGF response.

**Uniprot ID:**

[P17948](#)

**NCBI:**

[NP\\_001153392.1](#)

**GeneID:**

[2321](#)

**Host / Isotype:**

Mouse / IgG1

**Recommended Isotype Controls:**

SM10P (for use in human samples), AM03095PU-N

**Clone:**

FLTEWI (EWI)

**Immunogen:**

Recombinant Human soluble extracellular Flt-1 protein (D5) (*Cat.-No* DA3539)

**Format:**

**State:** Lyophilized purified IgG fraction from Cell Culture Supernatant

**Purification:** Protein G Chromatography

**Buffer System:** PBS

**Reconstitution:** Restore in sterile water to a concentration of 0.1-1.0 mg/ml

**Applications:**

**ELISA:** 1-10 µg/ml.

**Western blotting:** 1-10 µg/ml.

**Immunoprecipitation:** 1-5 µg/ml lysate or reaction volume.

**Immunofluorescence.**

**FACS:** 2-10 µg/ml.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:** The monoclonal antibody will recognize recombinant and naturally occurring form of Human VEGFR-1/Flt-1.  
It cross reacts with Mouse Flt-1 (e.g. natural occurring soluble Mouse Flt-1) in Western blot analysis (See Figure 1).

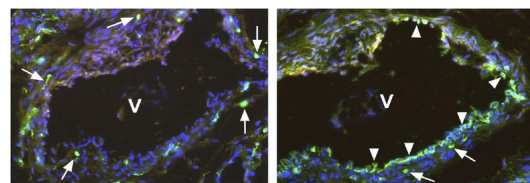
**Species Reactivity:** **Tested:** Human, Mouse.

**Storage:** Store lyophilized at 2-8°C for 6 months or at -20°C long term.  
After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.  
Avoid repeated freezing and thawing.  
Shelf life: one year from despatch.

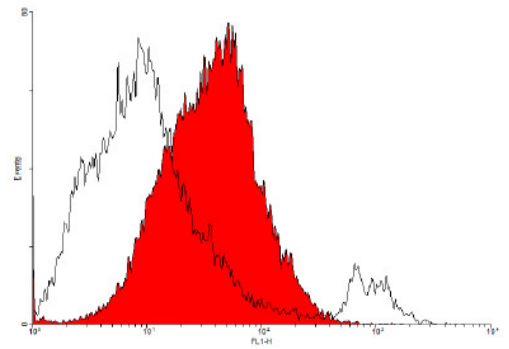
**General Readings:**

1. Barleon B, Totzke F, Herzog C, Blanke S, Kremmer E, Siemeister G, et al. Mapping of the sites for ligand binding and receptor dimerization at the extracellular domain of the vascular endothelial growth factor receptor FLT-1. *J Biol Chem.* 1997 Apr 18;272(16):10382-8. PubMed PMID: 9099677.
2. Roeckl W, Hecht D, Sztajer H, Waltenberger J, Yayon A, Weich HA. Differential binding characteristics and cellular inhibition by soluble VEGF receptors 1 and 2. *Exp Cell Res.* 1998 May 25;241(1):161-70. PubMed PMID: 9633524.

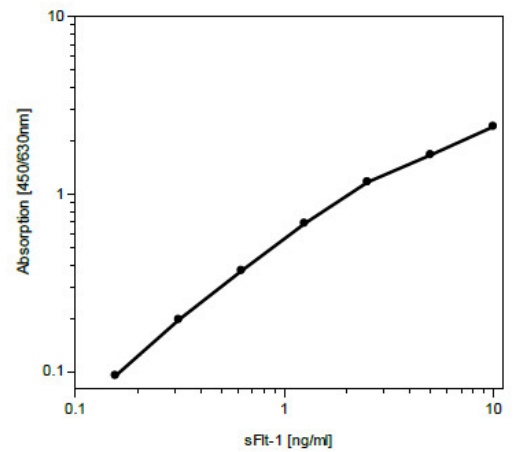
**Pictures:** Immunofluorescence staining (green) using Polyclonal antibody directed against the C-terminal end of native soluble VEGFR-1/Flt-1 Cat.-No DP3522 (Left panel) and Monoclonal antibody directed against the extracellular domain of the membrane-bound VEGFR-1/Flt-1 Cat.-No DM3507 (Right panel). You see two neighboring sections of a Human Vein (V), located near a hemangioma. The antibody against the soluble VEGFR-1/Flt-1 marked single cells (arrows) within the media and adventitia of the vein. The antibody against the membrane-bound VEGFR-1/Flt-1 marked single cells (arrows) and the endothelium (arrowhead) of the vein. Cell nuclei are stained with Dapi (blue). The experiment was performed by K. Butler and J. Wilting, University Göttingen, Germany.



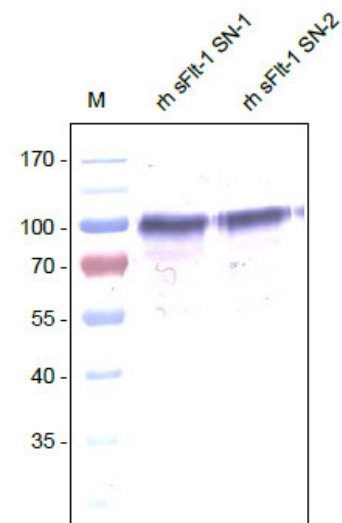
FACS analysis with porcine aortic endothelial cells (PAE/Flt1) expressing human VEGFR-1/Flt-1.



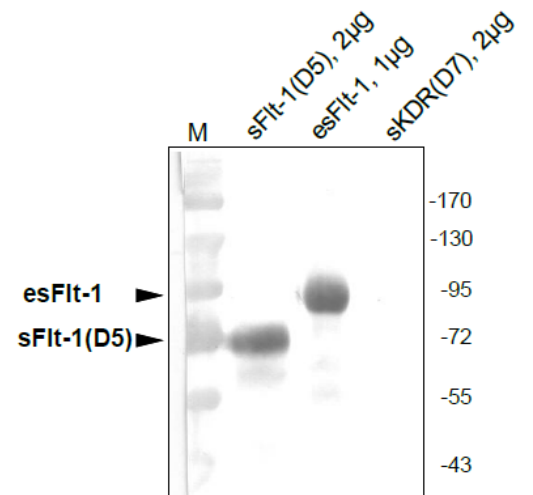
FLT-1 Sandwich-ELISA using recombinant human soluble FLT-1 as standard. Mouse anti-human FLT-1 #EWI (Cat.Nr DM3507) was used as capture antibody, Biotinylated rabbit anti-human FLT-1 was used for detection.



Western analysis with recombinant human endogenous sFlt-1 (esFlt-1) conditioned supernatant (insect cells).



Western Blot analysis showing cross reactivity of VEGFR-1/Flt-1 antibody Cat.-No DM3507 with recombinant Human endogenous sFlt-1 (esFlt-1) and sFlt-1(D5). There is no cross reactivity with recombinant Human sKDR.



Western Blot analysis showing cross reactivity of VEGFR-1/Flt-1 antibody Cat.-No DM3507 with recombinant Murine sFlt-1

