



## Anti-human endogenous soluble VEGFR-1/Flt-1 „Vascular Endothelial Growth Factor Receptor-1“

**Catalog Number** 102-PA21  
**Lot Number** (See product label)  
**Size** 200µg

**Species Reactivity** Human  
**Isotype** Polyclonal Rabbit IgG  
**Immunogen** Recombinant human esFlt-1 (RT# S01-009)  
*Accession codes:*  
P22333  
NM 002253.2

**Preparation:** Produced from sera of rabbits pre-immunized with highly pure (>95%) recombinant human esKDR (Ser27-His687) derived from insect cells.

**Purification:** Protein-A purified

**Endotoxin level:** < 0.1 EU/1µg of the antibody (LAL)

**Formulation:** Lyophilized from PBS, pH 7.2

**Reconstitution:** Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.

**Storage/Stability:** The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C. **Avoid repeated freeze-thaw cycles!**

**Country of Origin:** Germany

### APPLICATIONS

**Western Blot:** 2-5µg/mL

**Immunofluorescence staining:** Yes

**NOTE:** Optimal dilutions should be determined by each laboratory for each application!

**For Research use only  
Not for human use.**

### Product Information

Recombinant human soluble Vascular Endothelial Growth Factor Receptor-1 (sVEGFR-1) is the naturally occurring form and was cloned from total RNA of human umbilical vein endothelial cells. The recombinant mature sVEGFR-1 is a glycosylated monomeric protein with a mass of approximately 96 kDa.

Endothelial cells express three different vascular endothelial growth factor (VEGF) receptors, belonging to the family of receptor tyrosine kinases (RTKs). They are named VEGFR-1 (Flt-1), VEGFR-2 (KDR/Flk-1), and VEGFR-3 (Flt-4).

Their expression is almost exclusively restricted to endothelial cells, but VEGFR-1 can also be found on monocytes, dendritic cells and on trophoblast cells. The *flt-1* gene was first described in 1990.

The receptor contains seven immunoglobulin-like extracellular domains, a single transmembrane region and an intracellular split tyrosine kinase domain. Compared to VEGFR-2 the Flt-1 receptor has a higher affinity for VEGF but a weaker signaling activity. VEGFR-1 thus leads not to proliferation of endothelial cells, but mediates signals for differentiation. Interestingly, a naturally occurring soluble variant of VEGFR-1 (sVEGFR-1) was found in HUVEC supernatants in 1996, which is generated by alternative splicing of the *flt-1* mRNA.

The biological functions of sVEGFR-1 still are not clear, but it seems to be an endogenous regulator of angiogenesis, binding VEGF with the same affinity as the full-length receptor.

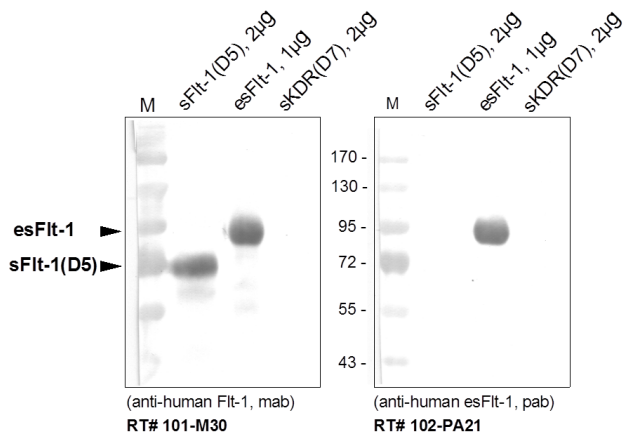
Recombinant human esFlt-1 consist of the first 6 Ig-like loops followed by the unique C-terminal end: *GEHC NKKAVFSRISKFKSTRNDCTTQSNVKH*.

### Reference

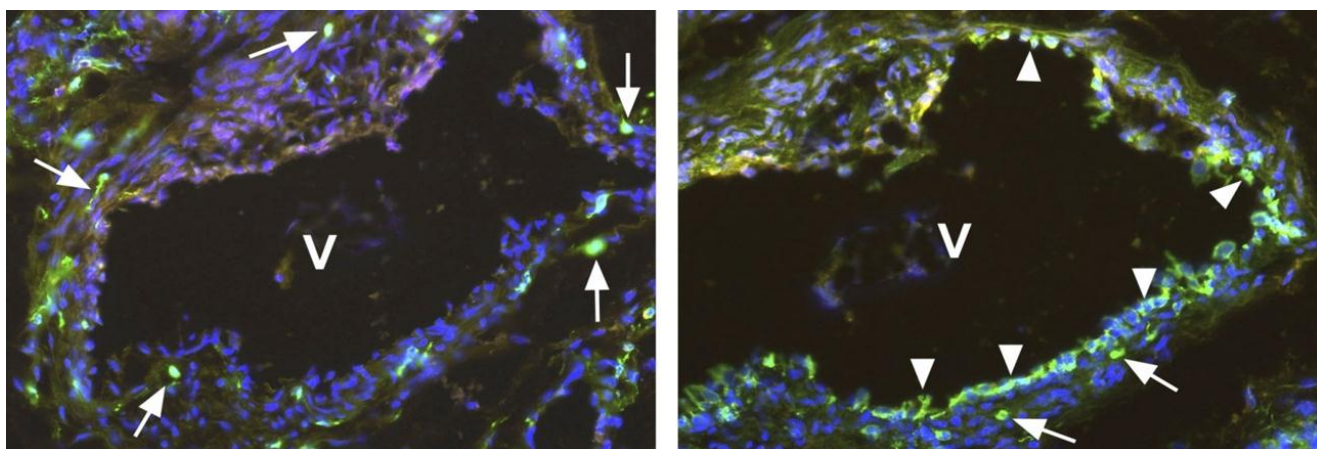
Röckl et al, Exp Cell Res 241:161 (1998); Barleon et al, J Biol Chem 272:10382 (1997).



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**Figure 1. Western Analysis** of anti-human esFlt-1. Samples were loaded in 10% SDS-polyacrylamide gel under reducing conditions. Left panel: monoclonal antibody against Flt-1; Right panel: polyclonal antibody (peptide) against the unique C-terminal end of esFlt-1.



**Figure 2: Immunofluorescence staining** (green) of 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).

Provided by Prof. J. Wilting, Göttingen, Germany.