# FLT1
# Recombinant Human VEGFR-1 / Fc Chimera, soluble

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| **Catalog No.** | CRF105A<br>CRF105B | **Quantity:** | 10 µg<br>50 µg |

**Alternate Names:** Vascular Endothelial Growth Factor Receptor-1, Fms-like tyrosine kinase 1, FLT-1

**Description:** Recombinant human soluble Vascular Endothelial Growth Factor Receptor-1 was fused with the Fc part of human $IgG_1$. The recombinant mature $sVEGFR\text{-}1_{D1\text{-}7}$/Fc is a disulfide-linked homodimeric protein. The soluble receptor protein consists of all 7 extracellular domains (Met1-Thr751), which contain all the information necessary for high affinity ligand binding.
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. All VEGF-receptors have seven immunoglobulin-like extracellular domains, a single transmembrane region and an intracellular split tyrosine kinase domain. VEGFR-2 has a lower affinity for VEGF than the Flt -1 receptor, but a higher signaling activity. Mitogenic activity in endothelial cells is mainly mediated by VEGFR-2 leading to their proliferation. Differential splicing of the flt-1 gene leads to the formation of a secreted, soluble variant of VEGFR-1 (sVEGFR-1). No naturally occurring, secreted forms of VEGFR-2 have so far been reported. The binding of $VEGF_{165}$ to VEGFR-2 is dependent on heparin.

**UniProt ID:** P17948

**Gene ID:** 2321

**Source:** Insect cells

**Molecular Weight:** 130 kDa, (954 aa) monomer

**Formulation:** Lyophilized from PBS, pH 7.4.

**Purity:** > 90%, by SDS-PAGE and visualized by silver stain

**Endotoxin Level:** < 0.1 EU/µg

**Biological Activity:** The activity of sVEGFR-1/Fc was determined by its ability to inhibit the VEGF-dependent proliferation of human umbilical vein endothelial cells.

**Reconstitution:** **Centrifuge vial prior to opening**. The lyophilized sVEGFR-1/Fc is soluble in water and most aqueous buffers. The lyophilized sVEGFR-1/Fc should be reconstituted in PBS or medium to a concentration ≥ 50 µg/ml.

**Storage & Stability:** Lyophilized samples are stable for greater than six months at -20°C to -80°C. Reconstituted sVEGFR-1/Fc should be stored in working aliquots at -20°C to -80°C. **Avoid repeated freeze-thaw cycles**.

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**Amino Acid Sequence:** SKLKDPELSL KGTQHIMQAG QTLHLQCRGE AAHKWSLPEM VSKESERLSI TKSACGRNGK QFCSTLTLNT AQANHTGFYS CKYLAVPTSK KKETESAIYI FISDTGRPFV EMYSEIPEII HMTEGRELVI PCRVTSPNIT VTLKKFPLDT LIPDGKRIIW DSRKGFIISN ATYKEIGLLT CEATVNGHLY KTNYLTHRQT NTIIDVQIST PRPVKLLRGH TLVLNCTATT PLNTRVQMTW SYPDEKNKRA SVRRRIDQSN SHANIFYSVL TIDKMQNKDK GLYTCRVRSG PSFKSVNTSV HIYDKAFITV KHRKQQVLET VAGKRSYRLS MKVKAFPSPE VVWLKDGLPA TEKSARYLTR GYSLIIKDVT EEDAGNYTIL LSIKQSNVFK NLTATLIVNV KPQIYEKAVS SFPDPALYPL GSRQILTCTA YGIPQPTIKW FWHPCNHNHS EARCDFCSNN EESFILDADS NMGNRIESIT QRMAIIEGKN KMASTLVVAD SRISGIYICI ASNKVGTVGR NISFYITDVP NGFHVNLEKM PTEGEDLKLS CTVNKFLYRD VTWILLRTVN NRTMHYSISK QKMAITKEHS ITLNLTIMNV SLQDSGTYAC RARNVYTGEE ILQKKEITIR DQEAPYLLRN LSDHTVAISS STTLDCHANG VPEPQITWFK NNHKIQQEPG IILGPGSSTL FIERVTEEDE GVYHCKATNQ KGSVESSAYL TVQGTRSDKT HTCPPCPAPE LLGGPSVFLF PPKPKDTLMI SRTPEVTCVV VDVSHEDPEV KFNWYVDGVE VHNAKTKPRE EQYNSTYRVV SVLTVLHQDW LNGKEYKCKV SNKALPAPIE KTISKAKGQP REPQVYTLPP SREEMTKNQV SLTCLVKGFY PSDIAVEWES NGQPENNYKT TPPMLDSDGS FFLYSKLTVD KSRWQQGNVF SCSVMHEALH NHYTQKSLSL SPGK

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