# Product Data Sheet

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| Product Name: | FLT1 Human |
| Cat. No.: | GP22507 |
| Batch No.: | 1 |

## Product Data

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| Purity | >98% | Source | Insect Cells. |
| Phycical Appearance | solid | Shipping Condition | Shipped at Room temp. |
| Synonyms | FLT-1; FLT1; Tyrosine-protein kinase receptor FLT; Flt-1; Tyrosine-protein kinase FRT; Fms-like tyrosine kinase 1; VEGFR-1. | | |
| Amino Acid Sequence | MVSYWDTGVL LCALLSCLLL TGSSSGSKLK DPELSLKGTQ HIMQAGQTLH LQCRGEAAHK WSLPEMVSKE SERLSITKSA CGRNGKQFCS TLTLNTAQAN HTGFYSCKYL AVPTSKKKET ESAIYIFISD TGRPFVEMYS EIPEIIHMTE GRELVIPCRV TSPNITVTLK KFPLDTLIPD GKRIIWDSRK GFIISNATYK EIGLLTCEAT VNGHLYKTNY LTHRQTNTII DVQISTPRPV KLLRGHTLVL NCTATTPLNT RVQMTWSYPD EKNKRASVRR RIDQSNSHAN IFYSVLTIDK MQNKDKGLYT CRVRSGPSFK SVNTSVHIYD KAFITVKHRK QQVLETVAGK RSYRLSMKVK AFPSPEVVWL KDGLPATEKS ARYLTRGYSL IIKDVTEEDA GNYTILLSIK QSNVFKNLTA TLIVNVKPQI YEKAVSSFPD PALYPLGSRQ ILTCTAYGIP QPTIKWFWHP CNHNHSEARC DFCSNNEESF ILDADSNMGN RIESITQRMA IIEGKNKMAS TLVVADSRIS GIYICIASNK VGTVGRNISF YITDVPNGFH VNLEKMPTEG EDLKLSCTVN KFLYRDVTWI LLRTVNNRTM HYSISKQKMA ITKEHSITLN LTIMNVSLQD SGTYACRARN VYTGEEILQK KEITIRGEHC NKKAVFSRIS KFKSTRNDCT TQSNVKH. | | |
| Solubility | It is recommended to reconstitute the lyophilized FLT1 in sterile water not less than 100µg/ml, which can then be further diluted to other aqueous solutions. | | |
| Formulation | FLT1 was lyophilized from a concentrated (1mg/ml) sterile solution containing 1xPBS. | | |

## Introduction

Endothelial cells express three different vascular endothelial growth factor (VEGF) receptors, belonging to the family of receptor tyrosine kinases (RTKs). They are named


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VEGFR-1 (Flt-1), VEGFR-2 (KDR/Flk-1), 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 splited 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 occuring soluble variant of VEGFR-1 (sVEGFR-1) was found in HUVE 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.

### Biological Activity

The activity of FLT1 was determined by its ability to inhibit the VEGF(165)-induced proliferation of HUVECs.

### Stability

Lyophilized FLT-1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution FLT1 should be stored at 4°C between 2-7 days and for future use below -18°C . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Please prevent freeze-thaw cycles.

### Background

Soluble FLT1 Human Recombinant produced in baculovirus is monomeric, glycosylated, polypeptide containing 687 amino acids and having a molecular mass of 96 kDa. The soluble receptor protein contains only the first 6 extracellular domains, which contain all the information necessary for binding of VEGF.The FLT1 is purified by proprietary chromatographic techniques.


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