

# Recombinant Human Fms-related Tyrosine Kinase 1, Fc Chimera

Cat. No. FLT1-979H Lot. No. (See product label)

## SPECIFICATION

**Product Overview**

Recombinant human soluble Vascular Endothelial Growth Factor Receptor-1 (sVEGFR-1D1-7) produced in *Insect cells* was fused with the Fc part of human IgG1. The recombinant mature sVEGFR-1D1-7/Fc is a disulfide-linked homodimeric protein. The sVEGFR-1D1-7/Fc monomers have a mass of approximately 130 kDa. The soluble receptor protein consists of all 7 extracellular domains (Met1-Thr751), which contain all the information necessary for high affinity ligand binding.

**Species** Human

**Source** Insect Cells

**Description**

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 signalling 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<sub>165</sub> to VEGFR-2 is dependent on heparin.

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<b>Purity</b>	> 95%, by SDS-PAGE and visualised by silver stain.
<b>Endotoxin level</b>	< 0.1 ng per µg of sVEGFR-1.
<b>Stabilizer</b>	None.
<b>Formulation</b>	Lyophilized.
<b>Buffer</b>	PBS; pH 7.4.
<b>Biologically Activity</b>	The activity of sVEGFR-1/Fc was determined by its ability to inhibit the VEGF-dependent proliferation of human umbilical vein endothelial cells. The ED50 for this effect is typically 10-30 ng/ml.
<b>Reconstitution</b>	The lyophilised sVEGFR-1/Fc is soluble in water and most aqueous buffers. The lyophilised sVEGFR-1/Fc should be reconstituted in PBS or medium to a concentration not lower than 50 µg/ml.
<b>Stability</b>	Lyophilised samples are stable for greater than six months at -20°C to -70°C. Reconstituted sVEGFR-1/Fc should be stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles!

## GENE INFORMATION

<b>Gene Name</b>	FLT1 fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor) [ Homo sapiens ]
<b>Synonyms</b>	FLT1; fms-related tyrosine kinase 1 (vascular endothelial growth factor/vascular permeability factor receptor); FLT; VEGFR1; vascular endothelial growth factor receptor 1; EC 2.7.10.1; VEGFR-1; Vascular permeability factor receptor; Flt-1; Tyrosine-protein kinase receptor FLT; Tyrosine-protein kinase FRT; Fms-like tyrosine

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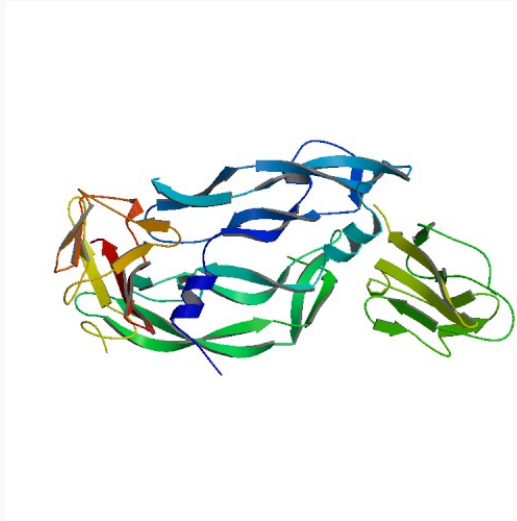
	kinase 1; FRT
<b>Gene ID</b>	2321
<b>mRNA Refseq</b>	NM_001159920
<b>Protein Refseq</b>	NP_001153392
<b>MIM</b>	165070
<b>UniProt ID</b>	P17948
<b>Chromosome Location</b>	13q12
<b>Pathway</b>	Cytokine-cytokine receptor interaction; Endocytosis; Focal adhesion; Signaling by VEGF
<b>Function</b>	ATP binding; growth factor binding; identical protein binding; nucleotide binding; receptor activity; transferase activity; vascular endothelial growth factor receptor activity

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