

FLT1

Recombinant Human VEGFR-1 (D5), soluble

Catalog No.	CRF102A CRF102B CRF102C	Quantity:	5 µg 20 µg 1 mg
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 domain D1-5 (sVEGFR-1D1-5) is produced as a non-chimeric protein in a monomeric form. The soluble receptor protein contains only the first 5 extracellular domains, which contain all the information necessary for binding of VEGF. 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), 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 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.		
UniProt ID:	P17948-2		
Gene ID:	2321		
Source:	Insect cells		
Molecular Weight:	70 kDa (536 aa) monomer		
Formulation:	Lyophilized from PBS		
Purity:	> 90% as determined by SDS PAGE and visualized by silver stain		
Endotoxin Level:	< 1 EU/µg		
Biological Activity:	The activity of sVEGFR-1 D1-5 was determined by its ability to inhibit the VEGF-A-induced proliferation of HUVECs.		
Reconstitution:	Centrifuge vial prior to opening. Soluble in water and most aqueous buffers. Add deionized water to the vial to fully solubilize the protein to a concentration ≥ 100 ng/ml.		
Storage & Stability:	Lyophilized protein is stable for 6 months at -20°C to -80°C. Store reconstituted protein in working aliquots at -20°C to -80°C. Avoid repeated freeze-thaw cycles.		

Amino Acid Sequence: SKLKDPELSL KGTQHIMQAG QTLHLQCRGE AAHKWSLPPEM 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 MKVKAFFPSPE VVWLKDGLPA TEKSARYLTR GYSLIHKDVT
EEDAGNYTIL LSIKQSNVFK NLTATLIVNV KPQIYEKAVS SFPDPALYPL GSRQILTCTA
YGIPQPTIKW FWHPCNHNHS EARCDFCSNN EESFILDADS NMGNRIESIT
QRMAIIEGKN KMASTLVVAD SRISGIYICI ASNKVGTVGR NISFYITDVP NGFHVN

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