Datasheet for ABIN1589607

FLT1 Protein (glycosylated, Monomer, Soluble)

2 Images

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Overview

Quantity:	20 µg
Target:	FLT1
Protein Characteristics:	glycosylated, Monomer, Soluble
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active

Product Details

Purpose:	VEGFR-1/Flt-1 (D3), soluble
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 VAGKRSY
Specificity:	Chromosomal location:13q12
Characteristics:	Length (aa):327
Purity:	> 90 % by SDS-PAGE

Target Details

Target:	FLT1
Alternative Name:	VEGFR-1/Flt-1 (FLT1 Products)
Background:	Recombinant human soluble Vascular Endothelial Growth Factor Receptor-1 domain D1-3 (sVEGFR-1(D3)) is produced as a non-chimeric protein in a monomeric form. The soluble receptor protein contains only the first 3 extracellular domains, which contain all the information necessary for binding of VEGF. The receptor monomers have a mass of approximately 45 kDa containing 352 amino acid residues. 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 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. Synonyms: soluble vascular endothelial growth factor receptor-1, soluble FLT1, soluble VEGFR-1
Molecular Weight:	45.0 kDa
Gene ID:	2321
NCBI Accession:	NM_001159920, NP_001153392
UniProt:	P17948
Pathways:	RTK Signaling, Signaling Events mediated by VEGFR1 and VEGFR2, VEGFR1 Specific Signals

Application Details

Application Notes:	The activity of sVEGFR-1(D3) was determined by its ability to inhibit the VEGF-A-induced proliferation of HUVECs.
Comment:	Soluble Receptors

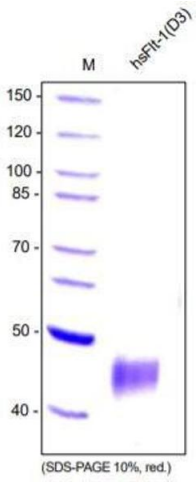
Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	The lyophilized sVEGFR-1(D3) is soluble in water and most aqueous buffers and should be reconstituted in PBS to a concentration not lower than 100 µg/mL.
Buffer:	PBS
Storage:	-20 °C,-80 °C
Storage Comment:	Lyophilized samples are stable for greater than six months at -20°C to -70°C. Reconstituted sVEGFR-1(D3) should be stored in working aliquots at -70°C.
Expiry Date:	6 months

Images



SDS-PAGE

Image 1. SDS-PAGE analysis of recombinant human soluble VEGFR-1D1-3 produced in insect cells. Sample was loaded in 10% SDS-polyacrylamide gelunder reducing condition and stained with Coomassie blue

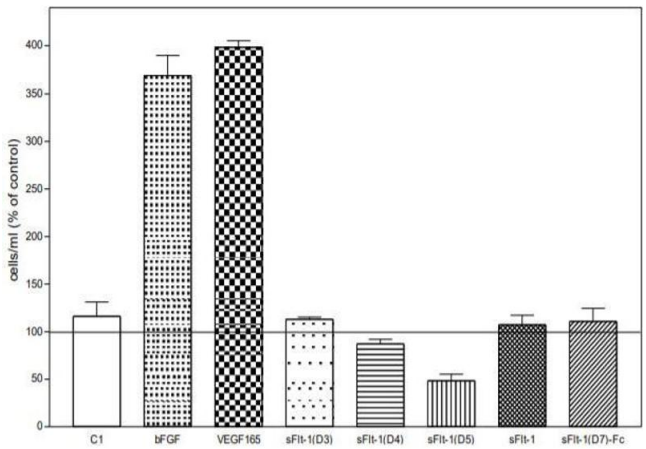


Image 2. Inhibition of the VEGF165-induced proliferation of HUVECs by recombinant human endogenous sFlt-1 and sFlt-1 constructs. HUVECs were stimulated with 10 ng/ml VEGF165, the soluble receptors were added with a 100X excess