

VEGFR-1/Flt1-14 active protein

Human VEGFR-1/Flt1-14, soluble

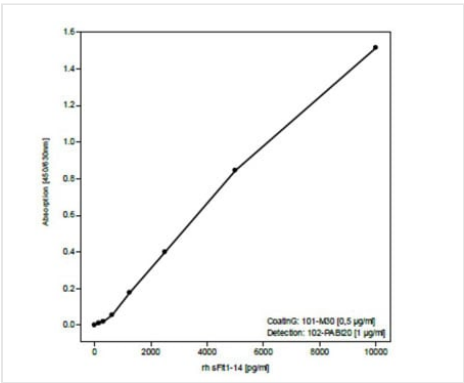
CATALOG # AAA14956	HOST Insect cells
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PRODUCT SYNONYMS

VEGFR-1/Flt1-14; Human VEGFR-1/Flt1-14; soluble; Fms-like tyrosine kinase 1; Vascular permeability factor receptor; sFlt1-14; VEGFR-1/Flt1-14 active protein

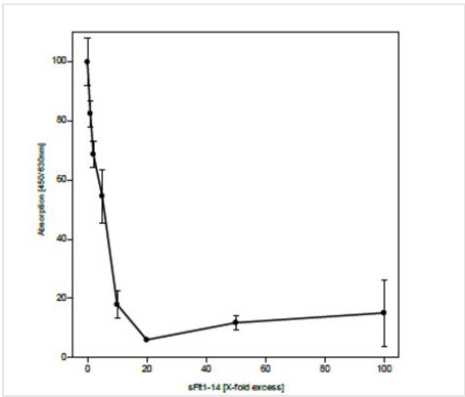
PRODUCT SPECIFICATIONS

Host	Insect cells
Purity/Purification	> 95% by SDS-PAGE & Coomassie stain
Form/Format	Lyophilized
Sequence	SKLKDPELSL KGTQHIMQAG QTLHLQCRGE AAHKWSLPEN VSKESERLSI TKSACGRNGK QFCSTLTNT AQANHTGFYS CKYLAVPTSK KKETESAIYI FISDTGRPFV EMYSEIPEII HMTGRELVI PCRVTSPNIT VTLKKFPLDT LIPDGKRIIW DSRKGFIIISN ATYKEIGLLT CEATVNGHLY KTNYLTHRQT NTIIDVQIST PRPVKLLRGH TLVLNCTATT PLNTRVQMTW SYPDEKNKRA SVRRRIDQSN SHANIFYSVL TIDKMQNKDK GLYTICRVRSR PSFKSVNTSV HIYDKAFITV KHRKQVLET VAGKRSYRLS MKVKAFPSPE VVWLKDGLPA TEKSARYLTR GYSLIIKDVT EEDAGNYTIL LSIKQSNVFK NLTATLIVNV KPQIYEKAVS SFPDPALYPL GSRQILTCTA YGIPQPTIKW FWHPCNHNHS EARCDFCSNN EESFILDADS NMGNRIESIT QRMIIIEGKN KMASTLVVAD SRISGIYICI ASNKVGTVGR NISFYITDVP NGFHVNLKEM PTEGEDLKLS CTVNKFLYRD VTWILLRTVN NRTMHYSISK QKMAITKEHS ITLNLTIMNV SLQDSGTYAC RARNVYTGEE ILQKKEITIR DQEAPYLLRN LSDHTVAISS STTLDCHANG VPEPQITWFK NNHKIQQEPE LYTSTSPSSS SSSPLSSSSS SSSSSSS
Sequence Length	707
Application Notes	Optimal dilutions should be determined by each laboratory for each application.
Buffer	PBS
Reconstitution	The lyophilized sFlt1-14 is soluble in water and most aqueous buffers and should be reconstituted in water to a concentration not lower than 100 ug/ml
Length (aa)	707
Protein RefSeq	NP_001153502.1
mRNA RefSeq	NM_001160030.1
Stabilizer	None
Result by N terminal sequencing	SKLKD
Biological Activity	The activity of sFlt1-14 was determined by its ability to inhibit the VEGF ₁₆₅ -induced proliferation of HDLECs.
Preparation and Storage	Lyophilized samples are stable for greater than six months at -20°C to -70°C. Reconstituted sFlt1-14 should be stored in working aliquots at -70°C. Avoid repeated freeze-thaw cycles!



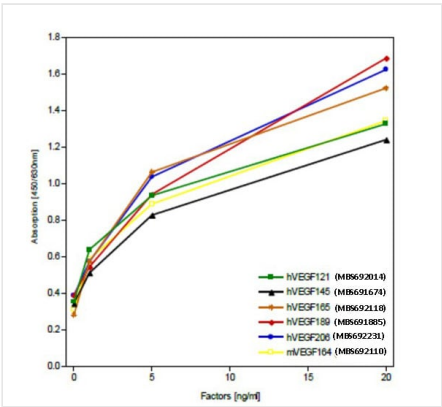
Application Data

Flt-1 Sandwich-ELISA using recombinant human sFlt1-14 as standard. Mouse anti-human Flt-1 #EWI was used as capture antibody, Biotinylated rabbit anti-human Flt-1 was used for detection.



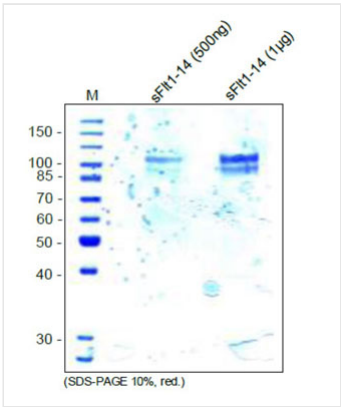
Application Data

Inhibition of VEGF165-induced proliferation in HDLECs by sFlt1-14. VEGF165 (10ng/ml) was preincubated with increasing amounts of soluble receptor for 1h respectively and then added to the cells.



Application Data

VEGF-A BioLISA using recombinant human soluble Flt1-14 for capturing and various recombinant human VEGF-A isoforms as standard. A Biotin-conjugated rabbit anti-human VEGF-A antibody [Cat#] was used for detection. As expected also mouse VEGF164 binds to sFlt1-14



SDS-PAGE

SDS-PAGE analysis of recombinant human sFlt1-14 produced in insect cells. Sample was loaded in 10% SDS-polyacrylamide gel under reducing condition and stained with Coomassie blue.

ADDITIONAL INFORMATION

Related Product Information for VEGFR-1/Flt1-14 active protein	A human-specific splicing variant of vascular endothelial growth factor (VEGF) receptor 1 (Flt1) was discovered, producing a soluble receptor (designated sFlt1-14) that is qualitatively different from the previously described soluble receptor (sFlt1) and functioning as a potent VEGF inhibitor. sFlt1-14 is generated in a cell type-specific fashion, primarily in non-endothelial cells. Notably, in vascular smooth muscle cells, all Flt1 messenger RNA is converted to sFlt1-14, whereas endothelial cells of the same human vessel express sFlt1. sFlt1-14 expression by vascular smooth muscle cells is dynamically regulated as evidenced by its upregulation on coculture with endothelial cells or by direct exposure to VEGF. Increased production of soluble VEGF receptors during pregnancy is entirely attributable to induced expression of placental sFlt1-14 starting by the end of the first trimester. Expression is dramatically elevated in the placenta of women with preeclampsia, specifically induced in abnormal clusters of degenerative syncytiotrophoblasts known as syncytial knots, where it may undergo further messenger RNA editing. sFlt1-14 is the predominant VEGF-inhibiting protein produced by the preeclamptic placenta, accumulates in the circulation, and hence is capable of neutralizing VEGF in distant organs affected in preeclampsia. Together, these findings revealed a new natural VEGF inhibitor that has evolved in humans, possibly to protect non-endothelial cells from adverse VEGF signaling. Furthermore, the study uncovered the identity of a VEGF-blocking protein implicated in preeclampsia.
Product Categories/Family for VEGFR-1/Flt1-14 active protein	Recombinant Protein; Soluble Receptors; VEGFR-1/Flt1-14; soluble

NCBI AND UNIPROT INFORMATION

NCBI GI #	229892220
NCBI GeneID	2321
NCBI Accession #	NP_001153392.1
NCBI GenBank Nucleotide #	NM_001159920.1
UniProt Accession #	P17948-2; O60722; A3E342; A3E344; A8KA71; B0LPF1; B2BF46; B2BF47; B2BF48; B3FR89; B5A923; F5H5L6; P17948
Molecular Weight	~105 kDa (Monomer)
NCBI Official Full Name	vascular endothelial growth factor receptor 1 isoform 2
NCBI Official Synonym Full Names	fms related tyrosine kinase 1
NCBI Official Symbol	FLT1
NCBI Official Synonym Symbols	FLT; FLT-1; VEGFR1; VEGFR-1
NCBI Protein Information	vascular endothelial growth factor receptor 1
UniProt Protein Name	Vascular endothelial growth factor receptor 1
UniProt Gene Name	FLT1
UniProt Synonym Gene Names	FLT; FRT; VEGFR1; VEGFR-1; FLT-1; FLT
UniProt Entry Name	VGFR1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/insect-active-protein/vegfr-1-flt1-14/14956>