Human Flt-1 / VEGFR-1 soluble (D4) (InCs)

Synonyms: soluble vascular endothelial growth factor receptor-1, soluble FLT1, soluble VEGFR-1

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
5 µg	1397.952.005		
20 µg	1397.952.020		

Please enquire for bulk quantities and other vial sizes

Description

Recombinant Human soluble Vascular Endothelial Growth Factor Receptor-1 domain D1-4 (sVEGFR-1(D4)) is produced as a non-chimeric protein in a monomeric form. The soluble receptor protein contains only the first 4 extracellular domains, which contain all the information necessary for binding of VEGF. The receptor monomers have a mass of approximately 55 kDa containing 457 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 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 occuring soluble variant of VEGFR-1 (sVEGFR-1) was found in HUVEC 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.

- **Source** Insect cells
- **Purity** ≥ 90 % (SDS-PAGE, silver stained)

Biological Activity

The activity of sVEGFR-1(D4) was determined by its ability to inhibit the VEGF-A-induced proliferation of HUVECs.

Reconstitution

The lyophilized sVEGFR-1(D4) is soluble in water and most aqueous buffers and should be reconstituted in PBS to a concentration not lower than 100µg/ml.

Amino Acid 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 VAGKRSYRLS MKVKAFPSPE VVWLKDGLPA
TEKSARYLTR GYSLIIKDVT EEDAGNYTIL LSIKQSNVFK NLTATLIVNV KPQIYEKAVS SFPDPALYPL
GSRQILTCTA YGIPQPTIKW FWHPCNHNHS EARCDFC

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

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