

## Recombinant Human Vascular Endothelial Growth Factor-C (rh VEGF-C)

**Synonyms:** VEGF-C, Vascular endothelial growth factor C, VRP, Flt4 ligand, Flt4-L, Vascular endothelial growth factor-related protein, VEGFC.

**Introduction:** VEGF-C, also known as Vascular Endothelial Growth Factor Related Protein (VRP), is a recently discovered VEGF growth factor family member that is most closely related to VEGF-D. Human VEGF-C cDNA encodes a pre-pro-protein of 416 amino acids residues. It is almost identical to the mouse VEGF-C protein. Similar to VEGF-D, VEGF-C has a VEGF homology domain spanning the middle third of the precursor molecule and long N- and C-terminal extensions. In adults, VEGF-C is highly expressed in heart, placenta, ovary and small intestine. Recombinant human VEGF-C, lacking the N- and C-terminal extensions and containing only the middle VEGF homology domain, forms primarily non-covalently linked dimers. This protein is a ligand for both VEGFR-2/KDR and VEGFR-3/FLT-4. Since VEGFR-3 is strongly expressed in lymphatic endothelial cells, it has been postulated that VEGF-C is involved in the regulation of the growth and/or differentiation of lymphatic endothelium. Although recombinant human VEGF-C is also a mitogen for vascular endothelial cells, it is much less potent than VEGF-A.

**Description:** Recombinant human VEGF-C contains 129 amino acids residues and was fused to a His- tag (6x His) at the C-terminal end. As a result of glycosylation VEGF-C migrates as an 18-24 kDa protein in SDS-PAGE under reducing conditions.

**Source:** *Sf9, Insect Cells*

**Physical Appearance:** Sterile Filtered White lyophilized (freeze-dried) powder.

**Formulation:** lyophilized from a concentrated (1mg/ml) solution with 1x PBS and BSA.

**Solubility:** It is recommended to reconstitute the lyophilized rh VEGF-C in sterile 18MΩ-cm water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rh VEGF-C although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rh VEG F-C should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** Greater than 90.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

**Amino Acid Sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Pro-Met-Ala-Glu.

**Biological Activity:** Measured by its ability to bind to the VEGFR-3/FLT-4 receptor in the Ba/F3-hVEGFR-3 assay. The ED<sub>50</sub> in this assay is about 4ng/ml.

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<i>small</i>	2 µg	Cat.N°	11344692
<i>medium</i>	10 µg	Cat.N°	11344693
<i>large</i>	50 µg	Cat.N°	11344695

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