



## Vascular Endothelial Growth Factor-C (152 amino acids), His Tag, rat recombinant (rrVEGF-C152-His-Sf9)

**Catalog No:** 94915  
**Lot No:** XXXXX  
**Source:** Sf9, Insect Cells  
**Synonyms:** VEGF-C152, Vascular endothelial growth factor C 152, VRP, Flt4 ligand, Flt4-L

### Background

VEGF-C152S is a point mutant generated by the replacement of the second conserved Cys residue of the recombinant processed VEGF-C by a Ser residue. VEGF-C 152S is analog to the human VEGF-C 156S mutant and only active toward VEGFR-3/FLT-4 but, unlike wild type VEGF-C, is unable to bind to and to activate signaling through VEGFR-2/KDR. VEGF-C152S was inactive in the vascular permeability assay and did not increase migration of the capillary endothelial cells, indicating that these VEGF-like effects of VEGF-C require VEGFR-2 binding. 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. The rat 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 rat 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 rat VEGF-C is also a mitogen for vascular endothelial cells, it is much less potent than VEGF-A.

### Description

Vascular Endothelial Growth Factor-C 152 rat recombinant contains 152 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.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

The protein was lyophilized from a concentrated (1 mg/ml) solution with BSA.

### Solubility

It is recommended to reconstitute the lyophilized VEGF-C 152 in sterile 18 MΩ-cm H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized Vascular Endothelial Growth Factor-C152, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution VEGF-C 152 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

### Purity

Greater than 90.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.



#### **Activity**

Measured by its ability to stimulate phosphorylation of the VEGFR-3/FLT-4 receptor in porcine aortic endothelial cells (PAE/FLT-4 cells). The ED50 for this effect is typically 150 - 300 ng/ml, corresponding to a specific activity of 3.3 - 6.6 KU/mg.

#### **Usage**

**This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.**