

# Human VEGF-C Protein (His Tag)

Catalog Number: 10542-H08H



**Sino Biological Inc.**  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

Flt4-L, VRP, VEGFC

### Protein Construction:

A DNA sequence encoding the mature form of human VEGFC (NP\_005420.1) corresponding to amino acid (Thr 103-Arg 227) was expressed with a C-terminal polyhistidine tag.

**Source:** Human

**Expression Host:** Human Cells

## QC Testing

**Purity:** > 97 % as determined by SDS-PAGE

### Bio-Activity

Measured by its binding ability in a functional ELISA. Scatchard analysis showed the affinity constant (Kd) of recombinant human VEGF-C bound to recombinant human VEGFR3 was 1.4 nM.

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Thr 103

### Molecular Mass:

The recombinant mature form of human VEGFC consists of 136 amino acids and has a predicted molecular mass of 15.5 kDa. In SDS-PAGE under reducing conditions, it migrates with an apparent molecular mass of 22-24 kDa due to glycosylation.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

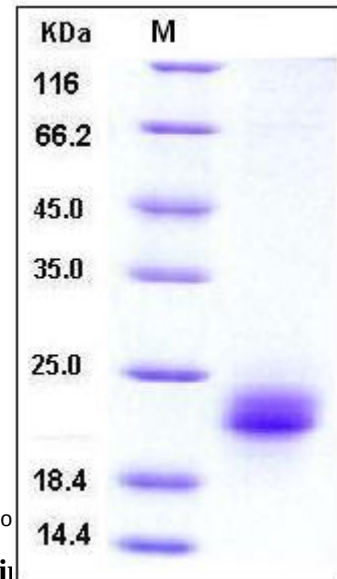
## Usage Guide

### Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

## SDS-PAGE:



### Reconstitution:

Detailed reconstitution

products.

### Protein Description

Vascular endothelial growth factor (VEGF)-C is a member of the VEGF family, a group of polypeptide growth factors which play key roles in the physiology and pathology of many aspects of the cardiovascular system, including vasculogenesis, hematopoiesis, angiogenesis and vascular permeability. While VEGFC is homologous to other members of the VEGF/PDGF family, it contains the C-terminal propeptide which has an unusual structure with tandemly repeated cysteine-rich motifs. Upon biosynthesis, VEGFC is secreted as a non-covalent monomer in an anti-parallel fashion. VEGF signalling in endothelial cells occurs through three tyrosine kinase receptors (VEGFRs) expressed by endothelial cells and hematopoietic precursors, and VEGF-C is a ligand for two receptors, VEGFR-3 (Flt4), and VEGFR-2. It is indicated that VEGFC undergoes a complex proteolytic maturation generating a variety of processed secreted forms with increased activity toward VEGFR-3, but only the fully processed form could activate VEGFR-2. VEGFC may function in angiogenesis of the venous and lymphatic vascular systems during embryogenesis, and also in the maintenance of differentiated lymphatic endothelium in adults.

### References

1. Mandriota SJ, Pepper MS, 1999, J Soc Biol., 193 (2):159-63.
2. Joukov V, et al., 1996, EMBO J., 15 (2): 290-98.
3. Vladimir Joukov, et al., 1997, The EMBO Journal Vol.16 No.13: 3898-3911.

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