

# Rat VEGFC / VEGF-C Protein (aa 108-223, Fc Tag)

Catalog Number: 80103-R01H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

VEGFC

### Protein Construction:

A DNA sequence encoding the rat VEGFC (O35757) (Ala108-Arg223) was expressed, fused with the Fc region of human IgG1 at the N-terminus.

Source: Rat

Expression Host: HEK293 Cells

## QC Testing

Purity: > 90 % as determined by SDS-PAGE

### Bio Activity:

1. Immobilized mouse FLT4-His (Cat:50584-M08H) at 10 µg/mL (100 µL/well) can bind rat Fc-VEGFC. The  $EC_{50}$  of rat Fc-VEGFC is 0.41-0.95 µg/mL. 2. Measured in a cell proliferation assay using human umbilical vein endothelial cells (HUVEC). The  $ED_{50}$  for this effect is typically 70-300 ng/mL.

### 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: Glu

### Molecular Mass:

The recombinant Rat VEGFC/Fc comprises 376 amino acids and has a predicted molecular mass of 41.5 kDa. The apparent molecular mass of the protein is approximately 44 and 34 kDa in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 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:

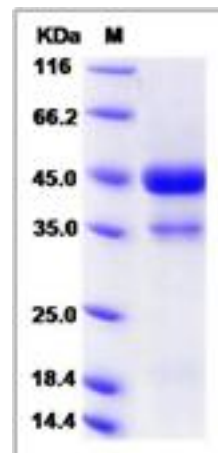
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Vascular endothelial growth factor C (VEGF-C) is a member of the VEGF family. Upon biosynthesis, VEGF-C protein is secreted as a non-covalent homodimer in an anti-parallel fashion. VEGF-C protein is a dimeric glycoprotein, as a ligand for two receptors, VEGFR-3 (Flt4), and VEGFR-2. VEGF-C may function in angiogenesis of the venous and lymphatic vascular systems during embryogenesis. VEGF-C protein is over-expressed in various human cancers including breast cancer and prostate cancer. VEGF-C/VEGFR-3 axis, through different signaling pathways, plays a critical role in cancer progression by regulating different cellular functions, such as invasion, proliferation, and resistance to chemotherapy. Thus, targeting the VEGF-C/VEGFR-3 axis may be therapeutically significant for certain types of tumors.

## References

1. Joukov V, *et al.* (1997) Vascular endothelial growth factors VEGF-B and VEGF-C. *J Cell Physiol.* 173(2): 211-5.
2. Su JL, *et al.* (2007) The role of the VEGF-C/VEGFR-3 axis in cancer progression. *Br J Cancer.* 96(4): 541-5.
3. Anisimov A, *et al.* (2009) Activated forms of VEGF-C and VEGF-D provide improved vascular function in skeletal muscle. *Circ Res.* 104(11): 1302-12.

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