Human VEGF-C Protein (His Tag)

Catalog Number: **10542-H08H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

Flt4-L; LMPH1D; VEGF-C; VRP

Protein Construction:

A DNA sequence encoding the mature form of human VEGFC (NP_005420.1) (Thr103-Arg227) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. Immobilized VEGF C-his (Cat:10542-H08H) at 2 μg/mL (100 μL/well) can bind VEGFR3 hFc(Cat:10806-H02H), the EC50 of VEGFR3 hFc(Cat:10806-H02H) is 2-15 ng/mL.
2. Scatchard analysis showed the affinity constant (Kd) of recombinant human VEGF-C bound to recombinant human VEGFR3 was 1.4 nM.
3. Measured in a cell proliferation assay using human umbilical vein endothelial cells (HUVEC). The ED50 for this effect is typically 0.1-0.5 μg/mL.
4. Captured VEGFR3/FLT4 Protein, Human (Cat.No.10806-H02H) on anti-Human IgG Fc via CM5 Chip can bind VEGF-C (Cat.No.10542-H08H) with an affinity constant of 31.82 pM as determined in a SPR assay (Biacore T200) (QC tested).

Endotoxin:

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

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 22.5 kDa due to glycosylation.

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

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

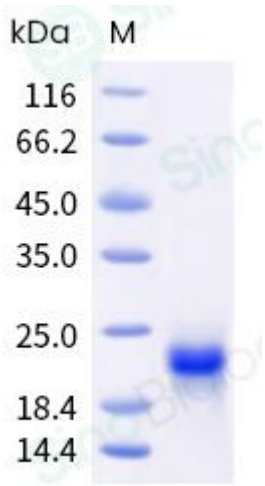
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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 momodimer in an anti-parellel 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.