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Certificate of Analysis and Data Sheet

Recombinant Rat Vascular Endothelial Growth Factor Related Protein

Catalog No.
228-11620

Source
Sf9, Insect Cells.

Synonyms

VEGF-C, Vascular endothelial growth factor C, VRP, Flt4 ligand, Flt4-L.

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. The rat VEGFC 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

228-11620 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.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Each mg of Rat VEGF-C contains 50mg BSA and PBS as buffer.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Solubility

It is recommended to reconstitute the lyophilized Vascular Endothelial Growth Factor C in sterile 18MΩ-cm H₂O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Vascular Endothelial Growth Factor C although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution VEGF-C 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.

Biological Activity

Measured by its ability to stimulate phosphorylation of the VEGFR-3/FLT-4 receptor in porcine aortic endothelial cells. The ED₅₀ for this effect is typically 200-300 ng/ml.

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