

Recombinant Human Vascular Endothelial Growth Factor C, His- tagged

Cat. No. VEGFC-45H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Rat Vascular Endothelial Growth Factor C 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 18-24kDa protein in SDS-PAGE under reducing conditions.

Species

Human

Source

Sf9 Cells

Description

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.

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Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The protein was lyophilized from a concentrated (1mg/ml) solution with BSA.
Solubility	It is recommended to reconstitute the lyophilized Vascular Endothelial Growth Factor C in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	Measured by its ability to stimulate phosphorylation of the VEGFR-3/FLT-4 receptor in porcine aortic endothelial cells. The ED ₅₀ for this effect is typically 200-300ng/ml.
Storage	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.

GENE INFORMATION

Gene Name	VEGFC vascular endothelial growth factor C [Homo sapiens]
Synonyms	vascular endothelial growth factor C; FLT4 ligand DHM; vascular endothelial growth factor-related protein; Vascular endothelial growth factor C,Short name=VEGF-C; Vascular endothelial growth factor-related protein,Short name=VRP; VRP; Flt4 ligand,Short name=Flt4-L; AW228853; Flt4-L; VEGFC
Gene ID	7424
mRNA Refseq	NM_005429

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Protein Refseq	NP_005420
MIM	601528
UniProt ID	P49767
Chromosome Location	4q34.1-q34.3
Pathway	Bladder cancer; Cytokine-cytokine receptor interaction; Focal adhesion; Pancreatic cancer; Pathways in cancer; Renal cell carcinoma; mTOR signaling pathway
Function	growth factor activity; vascular endothelial growth factor receptor 3 binding

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