

Active Recombinant Rat Vascular Endothelial Growth Factor C/VEGFC Protein

Cat. No. Vegfc-454R **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Rat Vascular Endothelial Growth Factor C is expressed in Insect cells.

Species Rat

Source Insect Cells

Description

Rat 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. 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. rRa 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 rRa VEGF-C is also a mitogen for vascular endothelial cells, it is much less potent than VEGF-A. rRa VEGF-C contains 129 amino acids residues. As a result of glycosylation VEGF-C migrates as an 18-24 kDa protein in SDS-PAGE under reducing conditions.

Molecular Weight 18-24 kDa.

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Endotoxin Level	< 0.1 ng per g of rRa VEGF-C (1EU/g).
Purity	> 90% as determined by SDS-PAGE, RP-HPLC and AEX-FPLC.
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 200-300 ng/ml.
Formulation	Lyophilized protein from a concentrated solution with BSA.
Reconstitution	Please Note: Always centrifuge product before opening the vial. The lyophilized protein should be reconstituted in water to a concentration of 0.1-1.0 mg/ml. This solution can then be diluted into other aqueous buffers and stored at -20°C for future use.
Storage/Stability	The lyophilized protein, though stable at room temperature for up to 3 weeks, is best stored desiccated at -20°C. Reconstituted VEGF-C should be used immediately or stored long-term in undiluted working aliquots at -20°C. For long-term storage, it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid repeated freeze / thaw cycles.

GENE INFORMATION

Gene Name	<i>Vegfc</i> vascular endothelial growth factor C [<i>Rattus norvegicus</i>]
Synonyms	<i>Vegfc</i> ; vascular endothelial growth factor C; <i>Vegfc</i> ; VEGF-C; Vascular endothelial growth factor-related protein; VRP; Flt4-L; FLT4 ligand DHM; Flt4 ligand
Gene ID	114111
mRNA Refseq	NM_053653

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Protein Refseq	NP_446105
UniProt ID	O35757
Chromosome Location	16p11
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

PDB rendering based on 2c7w.



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