

Active Recombinant Rat VEGF-C152S Protein, His-tagged

Cat. No. Vegfc-46R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Rat Vascular Endothelial Growth Factor –C 152 contains 152 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	Rat
Source	Sf9 Cells
Description	VEGF-C152S is a point mutant generated by the replacement of the second conserved Cys residue of the recombinant processed VEGF-C by a Ser residue. VEGF-C 152S is analog to the human VEGF-C 156S mutant and only active toward VEGFR-3/FLT-4 but, unlike wild type VEGF-C, is unable to bind to and to activate signaling through VEGFR-2/KDR. VEGF-C152S was inactive in the vascular permeability assay and did not increase migration of the capillary endothelial cells, indicating that these VEGF-like effects of VEGF-C require VEGFR-2 binding. 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 VEGF-C 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

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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.

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 152 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 (PAE/FLT -4 cells). The ED ₅₀ for this effect is typically 150-300ng/ml, corresponding to a specific activity of 5 x 10 ³ Units/mg.
Storage	Lyophilized Vascular Endothelial Growth Factor-C152 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution VEGF-C 152 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 [Rattus norvegicus]

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Synonyms	VEGF-C; Vascular endothelial growth factor C; Flt4 ligand; FLT4 ligand DHM; AW228853; Flt4-L; VRP; AW228853; Vegfc; vascular endothelial growth factor C
Gene ID	114111
mRNA Refseq	NM_053653
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

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