

## Active Recombinant Rat VEGF-C152S Protein, His-tagged

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

### SPECIFICATION

<b>Product Overview</b>	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.
<b>Species</b>	Rat
<b>Source</b>	Sf9 Cells
<b>Description</b>	<p>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</p>

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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.

<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
<b>Formulation</b>	The protein was lyophilized from a concentrated (1mg/ml) solution with BSA.
<b>Solubility</b>	It is recommended to reconstitute the lyophilized Vascular Endothelial Growth Factor C 152 in sterile 18MΩ-cm H <sub>2</sub> O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
<b>Biological Activity</b>	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 <sub>50</sub> for this effect is typically 150-300ng/ml, corresponding to a specific activity of 5 x 10 <sup>3</sup> Units/mg.
<b>Storage</b>	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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<b>Synonyms</b>	VEGF-C; Vascular endothelial growth factor C; Flt4 ligand; FLT4 ligand DHM; AW228853; Flt4-L; VRP; AW228853; Vegfc; vascular endothelial growth factor C
<b>Gene ID</b>	<a href="#">114111</a>
<b>mRNA Refseq</b>	NM_053653
<b>Protein Refseq</b>	<a href="#">NP_446105</a>
<b>UniProt ID</b>	<a href="#">O35757</a>
<b>Chromosome Location</b>	16p11
<b>Pathway</b>	Bladder cancer; Cytokine-cytokine receptor interaction; Focal adhesion; Pancreatic cancer; Pathways in cancer; Renal cell carcinoma; mTOR signaling pathway
<b>Function</b>	growth factor activity; vascular endothelial growth factor receptor 3 binding

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