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California Bioscience

Product Datasheet

Product Name	Vascular Endothelial Growth Factor-C (152 a.a) Rat Recombinant
Cata No	CB500186
Source	*Sf9, Insect Cells*
Synonyms	VEGF-C152, Vascular endothelial growth factor C 152, VRP, Flt4 ligand, Flt4-L.

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 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.
Vascular Endothelial Growth Factor -C 152 Rat Recombinant 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 18-24 kDa protein in SDS-PAGE under reducing conditions.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

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 150-300 ng/ml, corresponding to a specific activity of 5 x 10^3 Units/mg.

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.

Stability

Lyophilized Vascular Endothelial Growth Factor-C152 although stable at room temperature

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for 3 weeks, should be stored desiccated below -18℃. Upon reconstitution VEGF-C 152 should be stored at 4℃ between 2-7 days and for future use below -18℃.

Please prevent freeze-thaw cycles.