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## Product Data Sheet

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Product Name: VEGF (121 a.a.) Human, Sf9  
 Cat. No.: GP21041  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Sf9, Insect Cells.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Vascular endothelial growth factor A; VEGF-A; Vascular permeability factor; VPF; VEGF; MGC70609.		
Amino Acid Sequence	APMAEGGGQNHHEVVKFMDVYQRSYCHPIETLVDIFQEYPDEIEYIFKPS CVPLMRCGGCCNDEGLECVPTESNITMQIMRIKPHQGQHIGEMSFLQHN KCECRPKKDRARQEKC DKPRR.		
Solubility	The lyophilized VEGF121 should be reconstituted in 50mM acetic acid to a concentration not lower than 50µg/ml.		

Formulation The protein was lyophilized from a solution containing 50mM acetic acid.

### Introduction

Vascular endothelial growth factor is an important signaling protein involved in both vasculogenesis and angiogenesis. As its name implies, VEGF activity has been mostly studied on cells of the vascular endothelium, although it does have effects on a number of other cell types (e.g. stimulation monocyte/ macrophagemigration, neurons, cancer cells, kidney epithelial cells ). VEGF mediates increased vascular permeability, induces angiogenesis, vasculogenesis and endothelial cell growth, promotes cell migration, and inhibits apoptosis. In vitro, VEGF has been shown to stimulate endothelial cell mitogenesis and cell migration. VEGF is also a vasodilator and increases microvascular permeability and was originally referred to as vascular permeability factor. Elevated levels of this protein are linked to POEMS syndrome, also known as Crow-Fukase syndrome. Mutations in this gene have been associated with proliferative and nonproliferative diabetic retinopathy.

### Biological Activity

Measured in a cell proliferation assay using primary HUVECs. The ED50 for this effect is

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typically 2-10ng/ml.

### Stability

Lyophilized Vascular Endothelial Growth Factor 121 although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution VEGF-121 should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

Vascular Endothelial Growth Factor-121 Human Recombinant produced in insect cells as an 18kDa homodimer, is a glycosylated, polypeptide chain containing 121 amino acids and having a molecular mass of approximately 36kDa. VEGF121 circulates more freely than other VEGF forms, which bind more tightly with vascular heparin sulfates. The VEGF-121 is purified by proprietary chromatographic techniques.

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