
Product Data Sheet

Product Name: VEGF (121 a.a.) Human

Cat. No.: GP21040

Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
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	APMAEGGGQN HHEVVKFMDV YQRSYCHPIE TLVDIFQEYP DEIEYIFKPS CVPLMRCGGC CNDEGLECVP TEESNITMQI MRIKPHQGQH IGEMSFLQHN KCECRPKKDR ARQENC DKPR R		
Solubility	It is recommended to reconstitute the lyophilized Vascular Endothelial Growth Factor -121 in sterile 18MΩ-cm H ₂ O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The protein was lyophilized from a concentrated (1mg/ml) solution with no additives.		

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.

Caution: Product has not been fully validated for medical applications. For research use only.

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Biological Activity

Determined by the dose-dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC) using a concentration range of 0.2-0.4 ng/ml corresponding to a specific activity of 2.5-5MU/mg.

Stability

Lyophilized Vascular Endothelial Growth Factor 121 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution VEGF-121 should be stored at 4°C between 2-7 days and for future use below -18°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 E.Coli is a double, non-glycosylated, polypeptide chain containing 121 amino acids and having a molecular mass of 28423 Dalton. 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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