



Product Datasheet

Product Name	Recombinant Human Vascular Endothelial Growth Factor (121 a.a.), Sf9
Cata No	CB500102
Source	Escherichia Coli
Synonyms	Vascular endothelial growth factor A, VEGF-A, Vascular permeability factor, VPF, VEGF, MGC70609

Description

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.

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.

Purity

Greater than 90.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Storage

Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C. The lyophilized protein remains stable until the expiry date when stored at -20°C.

Biological Activity

Determined by the dose-dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC) using a concentration range of 2-5 ng/ml, corresponding to a Specific Activity of 5×10^5 IU/mg.

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