

Active Recombinant Human VEGF121 Protein (121 aa)

Cat. No. VEGFA-301V **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant human VEGF-A121 (rhVEGF-A121) produced in E. coli is a disulfide-linked homodimer containing two non-glycosylated polypeptide chains of 121 amino acids each. A fully biologically active molecule, rhVEGF-A121 has a molecular mass of 28.2 kDa analyzed by non-reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.

Species

Human

Source

E.coli

ProteinLength

121

Description

VEGF-A121 is one of five isoforms (121, 145, 165, 189, and 206) of VEGF protein, a cytokine belonging to the Platelet Differentiation Growth Factor (PDGF) family, and existing as a disulfide-linked homodimeric glycoprotein. In contrast to the longer isoforms, VEGF-A121 is more freely diffusible, and cannot bind to heparin. In vivo, VEGF is expressed predominantly in lung, heart, kidney, and adrenal glands, and the expression of VEGF is up-regulated by a number of growth factors, including PDGF, Fibroblast Growth Factor (FGF), Epidermal Growth Factor (EGF), and Tumor Necrosis Factor (TNF). VEGF signals via binding to two tyrosine kinase receptors: the Fms-like tyrosine kinase 1 (Flt-1) and the kinase domain receptor (KDR). VEGF is a specific mitogen and survival factor, contributing to abnormal angiogenesis and cancer development.

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Form	Sterile Filtered White lyophilized (freeze-dried) powder.
Bio-activity	ED50 < 5 ng/mL, measured by a cell proliferation assay using HUVEC Cells, corresponding to a specific activity of > 2 × 10 ⁵ units/mg.
Molecular Mass	28.2 kDa, observed by non-reducing SDS-PAGE.
AA Sequence	MPMAEGGGQNHHEVVKFMDVYQRSYCHPIETLVDIFQEYPDEIEYIFKPSCVPLMRC GGCCNDEGLECVPTESNITMQIMRIKPHQGQHIGEMSFLQHNKCECRPKKDRARQ EKCDKPRR
Endotoxin	< 0.2 EU/μg, determined by LAL method.
Purity	> 95% as analyzed by SDS-PAGE and HPLC.
Storage	Lyophilized recombinant human VEGF-A121 (rhVEGF-A121) remains stable up to 6 months at -80 centigrade from date of receipt. Upon reconstitution, rhVEGF-A121 remains stable up to 2 weeks at 4 centigrade or up to 3 months at -20 centigrade.
Storage Buffer	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH ₂ O or PBS at 100 μg/mL.

GENE INFORMATION

Gene Name	VEGFA vascular endothelial growth factor A [Homo sapiens]
Official Symbol	VEGFA
Synonyms	VEGFA; vascular endothelial growth factor A; vascular endothelial growth factor, VEGF; VEGF A; VPF; vascular permeability factor; VEGF; MVCD1; MGC70609;

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Gene ID	7422
mRNA Refseq	NM_001025366
Protein Refseq	NP_001020537
MIM	192240
UniProt ID	P15692

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