

Datasheet

Vascular Endothelial Growth Factor

Human Recombinant

Product	Description	Catalogue-No.	Size
VEGF	Vascular endothelial growth factor, human recombinant	CB-1114100 CB-1114102	2 µg 10 µg

Product description

Synonyms: VEGF-A, vascular permeability factor

Vascular endothelial growth factor (VEGF) 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/macrophage migration, neurons, cancer cells, kidney epithelial cells). VEGF 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.

VEGF human recombinant produced in E. coli is a double, non-glycosylated, polypeptide chain containing 165 amino acids having a molecular mass of 38231 D. The VEGF is purified by proprietary chromatographic techniques.

Solubility, stability and storage conditions

It is recommended to reconstitute the lyophilized VEGF in sterile distilled water not less than 100 µg/ml which can then be further diluted to other aqueous solutions. Lyophilized VEGF although stable at room temperature for 3 weeks, should be stored desiccated below -20° C. Upon reconstitution VEGF should be stored at 2-8° C for up to 7 days and for future use below -20° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Composition

Sterile filtered white lyophilized (freeze-dried) powder. The VEGF protein was lyophilized from a concentrated (1 mg/ml) solution with no additives. VEGF protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.2875 as the extinction coefficient for a 0.1% (1 mg/ml) solution. 2. Analysis by RP-HPLC, using a calibrated solution of VEGF as a Reference Standard.

Amino acid sequence: APMAEGGGQN HHEVVKFMDV YQRSYCHPIE TLVDIFQEYP DEIEYIFKPS CVPLMRGGC CNDEGLECVP TEESNITMQI MRIKPHGGQH IGEMSFLQHN KCECRPKKDR ARQENPCGPC SERRKHLFVQ DPQTKCSCCK NTDSRCKARQ LELNERTCRC DKPRR

Purity: > 95.0% as determined by: (a) analysis by RP-HPLC. (b) analysis by SDS-PAGE.

Biological activity: VEGF activity was determined by the dose-dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC) using a concentration range of 1 to 8 ng/ml, corresponding to a specific activity of 125,000-1,000,000 U/mg.

Suitability

FOR RESEARCH USE ONLY!

Not approved for human or animal diagnostic or therapeutic procedures.

Technical Support

For technical support or questions or please contact your local PAN-Biotech partner or the technical department of PAN-Biotech via email (info@pan-biotech.com) or phone +49-8543-601630.