DATASHEET
Version 20181206

VEGF121, Human

Cat. No.: Z03140-50

Size: 50.0 ug

Synonyms: Vascular Endothelial Growth Factor121, VPF

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.
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 at GenScript.

Amino Acid Sequence:

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00001 MPMAEGGGQN HHEVVKFMDV YQRSYCHPIE TLVDIFQEYP
00041 DEIEYIFKPS CVPLMRCGGC CNDEGLECVP TEESNITMQI
00081 MRIKPHQGQH IGEMSFLQHN KCECRPKKDR ARQEKCDKPR
00121 R
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Source: *E. coli*

Species: Human

Biological Activity: ED_{50} < 5 ng/mL, measured by a cell proliferation assay using HUVEC Cells, corresponding to a specific activity of > 2×10^5 units/mg.

Molecular Weight: 28.2 kDa, observed by non-reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH_2O or PBS at 100 µg/ml.

Purity: > 95% as analyzed by SDS-PAGE and HPLC.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant human VEGF-A121 (rhVEGF-A121) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhVEGF-A121 remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.

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