

Overview

Synonyms	VPF, Folliculostellate cell-derived growth factor, Glioma-derived endothelial cell mitogen Vascular Endothelial Growth Factor (VEGF) is a potent growth and angiogenic cytokine. It stimulates proliferation and survival of endothelial cells, and promotes angiogenesis and vascular permeability. Expressed in vascularized tissues, Vascular Endothelial Growth Factor (VEGF) plays a prominent role in normal and pathological angiogenesis. Substantial evidence implicates Vascular Endothelial Growth Factor (VEGF) in the induction of tumor metastasis and intra-ocular neovascular syndromes.
Description	Vascular Endothelial Growth Factor (VEGF) signals through the three receptors; fms-like tyrosine kinase (flt-1), KDR gene product (the murine homolog of KDR is the flk-1 gene product) and the flt4 gene product. Recombinant human Vascular Endothelial Growth Factor A165 (rhVEGF-A165) produced in <i>Pichia pastoris</i> is a disulfide-linked homodimer containing two polypeptide chains of 165 amino acids each. A fully biologically active molecule, rhVEGF-A165 has a molecular mass of 38.2kDa analyzed by non-reducing SDS-PAGE and is obtained by chromatographic techniques.
Species	Human
Source	<i>P. pastoris</i>
Biological Activity	ED ₅₀ of 1-5ng/ml, measured by the dose-dependent stimulation of the proliferation of HUVEC cells, corresponding to a specific activity of 2x 10 ⁵ -1x 10 ⁶ units/mg.
Sequence	APMAEGGGQN HHEVVVKFMDV YQRSYCHPIE TLVDIFQEYP DEIEYIFKPS CVPLMRCGGC CNDEGLECVP TEESNITMQI MRIKPHQGQH IGEMSFLQHN KCECRPKKDR ARQENPCGPC SERRKHLFVQ DPQTCKCCK NTDSRCKARQ LELNERTCRC DKPRR

Properties

Measured Molecular Weight	38.2kDa, observed by non-reducing SDS-PAGE
Purity	> 95% as analyzed by reducing SDS-PAGE.
Formulation	Lyophilized after extensive dialysis against 25 mM HEPES and 150 mM NaCl, pH 7.0.
Reconstitution	Reconstituted in ddH ₂ O at 100 µg/ml.
Endotoxin Level	<0.5 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant human Vascular Endothelial Growth Factor A165 (rhVEGF-A165) remains stable up to 12 months at lower than -70°C from date of receipt. Upon reconstitution, rhVEGF-A165 should be stable up to 4 week at 4°C or up to 6 months at -20°C.

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