

Vascular endothelial growth factor 165

Murine, Recombinant (rmVEGF₁₆₅)

Expressed in *E. coli*

Cat. No. CRP08102

Lot. No. (See product label)

PRODUCT INFORMATION

Description: VEGF was initially purified from media conditioned by normal bovine pituitary folliculo-stellate cells and by a variety of transformed cell lines as a mitogen specific for vascular endothelial cells. It was subsequently found to be identical to an independently discovered vascular permeability factor (VPF), which was previously identified in media conditioned by tumor cell lines based on its ability to increase the permeability of capillary blood vessels. Three mouse cDNA clones, which arise through alternative splicing and which encode mature mouse monomeric VEGF having 120, 164, or 188, amino acids, respectively, have been identified. Two receptor tyrosine kinases (RTKs), Flt-1 and Flk-1 (the mouse homologue of human KDR), both members of the type III subclass of RTKs containing seven immunoglobulin-like repeats in their extracellular domains, have been shown to bind VEGF with high affinity. The roles of the homodimers of KDR, Flt, and the heterodimer of KDR/Flt in VEGF signal transduction remain to be elucidated. In vivo, VEGF has been found to be a potent angiogenesis inducer.

Amino-Acid Sequence: 165 amino acid

M. W. : 39.0 kDa

Recombinant: Expressed in *E. coli*

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

Formulation: Lyophilized from a 0.2mm filtered solution in PBS, pH 7.4.

Endotoxin: Less than 1EU/mg of rmVEGF₁₆₅ as determined by LAL method.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤-20°C. Further dilutions should be made in appropriate buffered solutions.

Storage: This lyophilized preparation is stable for several weeks at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

FOR RESEARCH USE ONLY



[PDB](#) rendering based on 1bj1.

GENE INFORMATION

Gene Name: [Vegfa](#)

Synonym: Vpf; Vegf; Vegf-a; Vegfa; Vegf120; Vegf164; Vegf188; vascular endothelial growth factor; vascular endothelial growth factor A; MGC70609; Vascular endothelial growth factor A precursor; Vascular permeability factor

Gene Type: protein coding

mRNA Refseq: [NM_001025250](#)

Protein Refseq: [NP_001020421](#)

GeneID: [22339](#)

UniProt ID: [A0FKR4](#); Q00731

Chromosome Location: 17 C; 17 24.2 cM

Pathway: Cytokine-cytokine receptor interaction; Focal adhesion; Pancreatic cancer; Renal cell carcinoma; VEGF signaling pathway; mTOR signaling pathway.

Function: Growth factor activity; heparin binding; protein binding.

REFERENCES

- 1.Neefjes VM, et al. New vessel formation and aberrant VEGF/VEGFR signaling in acute leukemia: does it matter?. 2003;Leuk. Lymphoma **43** (10): 1901-9.
- 2.Ria R, et al. Vascular endothelial growth factor and its receptors in multiple myeloma. 2003;Leukemia **17** (10): 1961-6.
- 3.Caldwell RB, et al. Vascular endothelial growth factor and diabetic retinopathy: pathophysiological mechanisms and treatment perspectives". 2004 ;Diabetes Metab. Res. Rev. **19** (6): 442-55.

2005-2008 Creative Biolabs. All rights reserved.

21 Brookhaven BLVD · Port Jefferson Station, NY 11776, USA
Technical Support: T: 631-871-5806 · F: 631-207-8356
E-mail: info@creative-biolabs.com
www.creative-biolabs.com