



## Vascular Endothelial Growth Factor 165 (VEGF165), human recombinant, plant based, bio-clean (rHuVEGF165)

**Catalog No:** 99907  
**Lot No:** XXXXX  
**Source:** *Hordeum vulgare* (barley grain)  
**Synonyms:** VEGF-AA, vascular permeability factor, VPF, Folliculostellate cell-derived growth factor, Glioma-derived endothelial cell mitogen

### Background

VEGF (Vascular endothelial growth factor) is the only growth factor that stimulates vascular permeability. It promotes endothelial proliferation and survival, angiogenesis, vasculogenesis and inhibits apoptosis. VEGF mitogenic activity is specific for endothelial cell and that makes it distinct among other growth factors. VEGF is thought to be important in the pathophysiology of neuronal and other tumors, by functioning as a promoter of angiogenesis for human gliomas. Human VEGF occurs in several molecular variants and the 165 form is the most common form in most tissues. Biological activities of VEGF are not species-specific and glycosylation is not required for biological activity.

### Description

Recombinant human VEGF165 contains 165 amino acids and a 6 a.a. Histidine-based tag for a total length of 171 a.a. and has a predicted molecular mass of 20 kDa. As a result of glycosylation, the recombinant protein migrates with an apparent molecular mass of 24 - 28 kDa in SDS-PAGE.

### Physical Appearance

Lyophilized

### Formulation

2xPBS pH 7.2, sterile filtered through 0.2 µm filter.

### Solubility

Note: Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile buffered saline to a concentration of no less than 100 µg/ml. For long term storage of the reconstituted solution it is recommended to add a carrier protein (0.1% HSA or BSA).

### Stability

The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

### Purity

Greater than 95% by SDS-PAGE gel analysis.

### Biological Activity

Each batch of growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of ISOkine® recombinant human VEGF 165 was determined by its dose-dependent effect on proliferation of Human Umbilical Vein Endothelial Cells (HUVEC). The ED50 for this effect is typically below 10 ng/ml corresponding to specific activity of > 1 x 10<sup>5</sup> U/mg. Optimal concentration should be determined for specific applications and cell lines.

### Endotoxin Level

Endotoxin level is less than 0.005 ng per µg of product (0.05 EU/µg).

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**MAT Assay**

Purified product carries no pyrogenic or pro-inflammatory contaminants, as assayed with monocyte activation test using Human 10-plex Cytokine Assay measuring IL-6, TNF-alpha and IL-1beta induction.

**Usage**

**This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.**