

## VEGF165 Protein, Human, Recombinant (Verified Cell Activity)

### General Information

Synonyms:	Vascular Endothelial Growth Factor Isoform 165; VEGFA; VEGF-165; VEGF165
Protein Construction:	Ala27-Arg191, Disulfide-linked homodimer
Expression Host:	Baculovirus Insect Cells
Accession:	NP_001165097
Molecular Weight:	20-22 kDa (reducing conditions); 39-42 kDa (non-reducing conditions)

### QC Testing

Biological Activity:	Measured in a cell proliferation assay using HUVEC human umbilical vein endothelial cells. Conn, G. et al. (1990) Proc. Natl. Acad. Sci. USA 87:1323. The ED50 for this effect is 1.50-12.0 ng/mL.
Endotoxin:	<0.01 EU per 1 µg of the protein by the LAL method.
Formulation:	Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA with BSA as a carrier protein.

### Preparation and Storage

#### Reconstitution:

Reconstitute at 100-500 µg/mL in sterile 4 mM HCl containing 0.1% human or bovine serum albumin.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Human Vascular endothelial growth factor (VEGF), also known as VEGF-A and vascular permeability factor (VPF), belongs to the platelet-derived growth factor family of cysteine-knot growth factors. It is a potent activator in vasculogenesis and angiogenesis both physiologically and pathologically. VEGF-A has 8 differently spliced isoforms, of which VEGF165 is the most abundant one. VEGF165 is a disulfide-linked homodimer consisting of two glycosylated 165 amino acid polypeptide chains. VEGF stimulates the cellular response through binding to tyrosine kinase receptors VEGFR1 and VEGFR2 on the cell surface. It is widely accepted that VEGFR2 mediate almost all of the known cellular responses to VEGF while the function of VEGFR1 is less defined and is thought to modulate the VEGFR2 signaling.

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