

Recombinant Human VEGF165 Protein

Catalog Number: GMP-TL612

Product Name

Generic Name	Recombinant Human VEGF165 Protein
Synonym	MVCD1, VEGF, VEGF16, VPF

Product Information

Protein sequence	A DNA sequence encoding the human VEGF165 (NP_001165097.1) was expressed with a polyhistidine tag at the C-terminus.
Expression Host	HEK293 Cells
QC Testing Purity	> 90 % as determined by SDS-PAGE
Activity	Determined by the dose-dependent stimulation of the proliferation of human umbilical vein endothelial cells (HUVEC). The expected ED ₅₀ for this effect is ≤ 20 ng/mL.
Endotoxin Level	< 0.1 EU per µg of the protein as determined by the LAL method.
Molecular Mass	The Recombinant Human VEGF165 consists of 193 amino acids and predicts a molecular mass of 22.3 kD.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6% mannitol are added as protectants before lyophilization. 24 months at 2 °C to 8 °C in lyophilized state.
Stability & Storage	6 months at -20 °C under sterile conditions after reconstitution. 12 months at -80 °C under sterile conditions after reconstitution. Recommend to aliquot the protein into smaller quantities after reconstituting with water for injection, normal saline or PBS, and keep the diluted concentration above 100 µg/mL. Avoid repeated freeze-thaw cycles.

Background

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, VEGF plays a prominent role in normal and pathological angiogenesis. Substantial evidence implicates VEGF in the induction of tumor metastasis and intra-ocular neovascular syndromes. 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.

References

1. Woolard J. et al. (2004) VEGF165b, an inhibitory vascular endothelial growth factor splice variant: mechanism of action, in vivo effect on angiogenesis and endogenous protein expression. *Cancer Res.* 64(21): 7822-7835.
2. Jia SF, et al. (2008) VEGF165 is necessary to the metastatic potential of Fas(-) osteosarcoma cells but will not rescue the Fas(+) cells. *J Exp Ther Oncol.* 7(2): 89-97.
3. Cimpean AM, et al. (2008) Vascular endothelial growth factor A (VEGF A) as individual prognostic factor in invasive breast carcinoma. *Rom J Morphol Embryol.* 49(3): 303-8.