

VEGF121b Protein, Human, Recombinant

General Information

Synonyms:	MVCD1;VEGF;VPF;vascular endothelial growth factor A
Protein Construction:	A DNA sequence encoding the human VEGF 121 isoform b (P15692-9) (Met1-Asp147,with last 6 amino acids switch from CDKPRR to SLTRKD) was expressed. Predicted N terminal: Ala 27
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P15692-9
Molecular Weight:	34.10 kDa (predicted); 20 and 16 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	<ol style="list-style-type: none">1. Measured by its binding ability in a functional ELISA. Immobilized human VEGF121b at 10 µg/mL (100µL/well) can bind human VEGFR2-Fc, the EC50 of human VEGFR2-Fc is 0.06-0.1 µg/mL.2. Measured in a cell proliferation assay using human umbilical vein endothelial cells (HUVEC). The ED50 for this effect is typically 1-5 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	<p>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.</p> <p><small>Actual storage temperature shall be subject to the COA.</small></p>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Vascular endothelial growth factor (VEGF), also known as vascular permeability factor (VPF) and VEGF-A, is a potent mediator of both angiogenesis and vasculogenesis in the fetus and adult. It is a member of the platelet-

derived growth factor (PDGF)/vascular endothelial growth factor (VEGF) family and often exists as a disulfide-linked homodimer. VEGF-A protein is a glycosylated mitogen that specifically acts on endothelial cells and has various effects, including mediating increased vascular permeability, inducing angiogenesis, vasculogenesis and endothelial cell growth, promoting cell migration, inhibiting apoptosis and tumor growth. VEGF-A protein is also a vasodilator that increases microvascular permeability, thus it was originally referred to as vascular permeability factor. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

Reference

- 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.
- 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.
- 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.
- HAmdollah Zadeh MA, et al. (2008) VEGF-mediated elevated intracellular calcium and angiogenesis in human microvascular endothelial cells in vitro are inhibited by dominant negative TRPC6. *Microcirculation.* 15(7): 605-14.
- Eisenach PA, et al. (2010) MT1-MMP regulates VEGF-A expression through a complex with VEGFR-2 and Src. *J Cell Sci.* 123(Pt 23):4182-4193.
- Claesson-Welsh L (2010) Gremlin: vexing VEGF receptor agonist. *Blood.* 116(18):3386-7.

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