

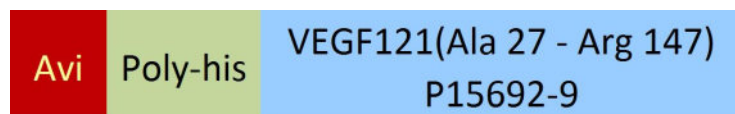
Synonym

RP1-261G23.1, MGC70609, MVCD1, VEGFA, VPF

Source

MABSol® Biotinylated Human VEGF121, Avitag, His Tag (VE1-H82E7) is expressed from human HEK293 cells. It contains AA Ala 27 - Arg 147 (Accession # [P15692-9](#)).

Predicted N-terminus: Ala 27

Molecular Characterization

This protein carries an Avi tag (Avitag™) at the N-terminus, followed by a polyhistidine tag

The protein has a calculated MW of 16.7 kDa. The protein migrates as 18 kDa and 22 kDa under reducing (R) condition, and 35-40 kDa under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

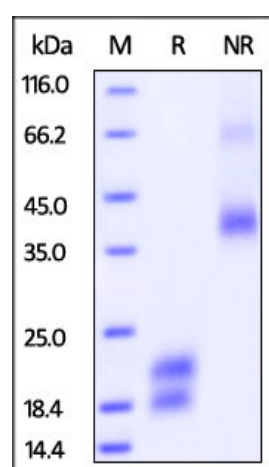
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

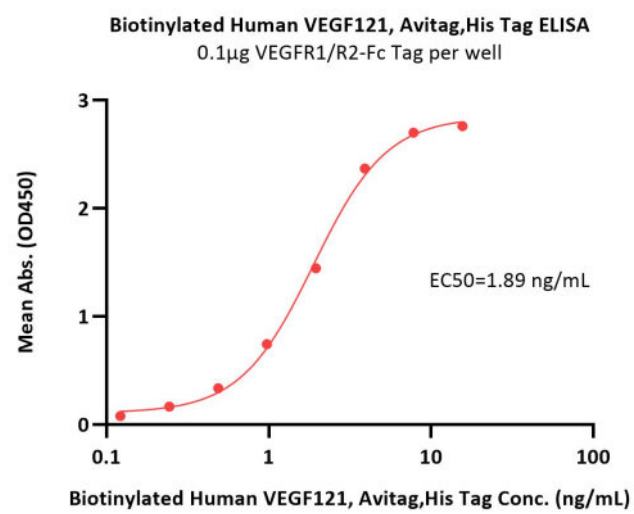
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

Biotinylated Human VEGF121, Avitag, His Tag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Immobilized VEGFR1/R2-Fc at 1 µg/mL (100 µL/well) can bind Biotinylated Human VEGF121, Avitag, His Tag (Cat. No. VE1-H82E7) with a linear range of 0.1-2 ng/mL (QC tested).

Background

Vascular endothelial growth factor (VEGF) is also known as vascular permeability factor (VPF) and VEGF-A, and is a member of the platelet-derived growth factor (PDGF)/vascular endothelial growth factor (VEGF) family and encodes a protein that is often found as a disulfide linked homodimer. This 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, and inhibiting apoptosis. Alternatively spliced transcript variants, encoding either freely secreted or cell-associated isoforms, have been characterized. Alternatively spliced isoforms of 121, 145, 165, 183, 189 and 206 amino acids in length are expressed in humans. VEGF165 appears to be the most abundant and potent isoform, followed by VEGF121 and VEGF189. VEGF121 is the only form that lacks a basic heparinbinding region and is freely diffusible. Mouse embryos expressing only the corresponding isoform (VEGF120) do not survive to term, and show defects in skeletogenesis. Human VEGF121 shares 87% aa sequence identity with corresponding regions of mouse and rat, 93% with feline, equine and bovine, and 91%, 95% and 96% with ovine, canine and porcine VEGF, respectively. VEGF121 induces the proliferation of lymphatic endothelial cells. The lymphangiogenesis may be promoted by upregulation of VEGF121, which may in turn act in part via induction of VEGF-C.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.