

Synonym

FLT,VEGFR1,FLT1

Source

Biotinylated Human VEGF R1, His,Avitag(VE1-H82E3) is expressed from human 293 cells (HEK293). It contains AA Ser 27 - Asn 756 (Accession # [P17948-1](#)).

Predicted N-terminus: Ser 27

Molecular Characterization

VEGF R1(Ser 27 - Asn 756)
P17948-1 Poly-his Avi

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

The protein has a calculated MW of 85.9 kDa. The protein migrates as 106-125 kDa under reducing (R) 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

>90% 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.

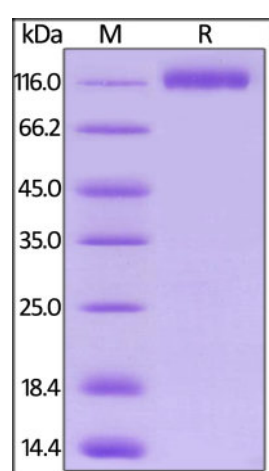
Storage

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

Please avoid repeated freeze-thaw cycles.

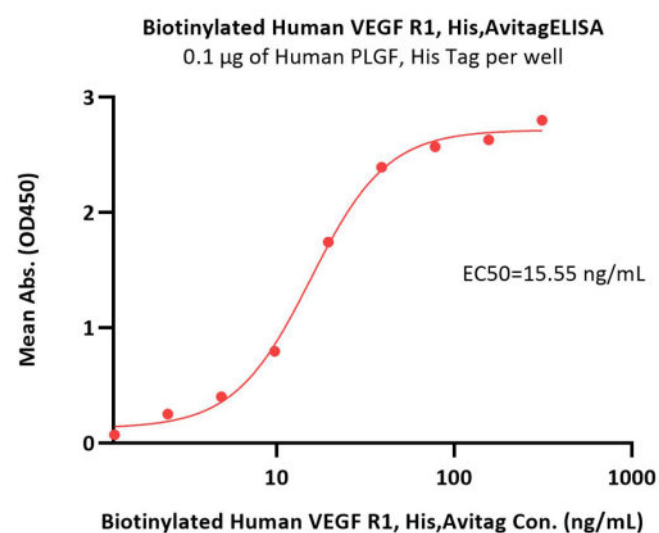
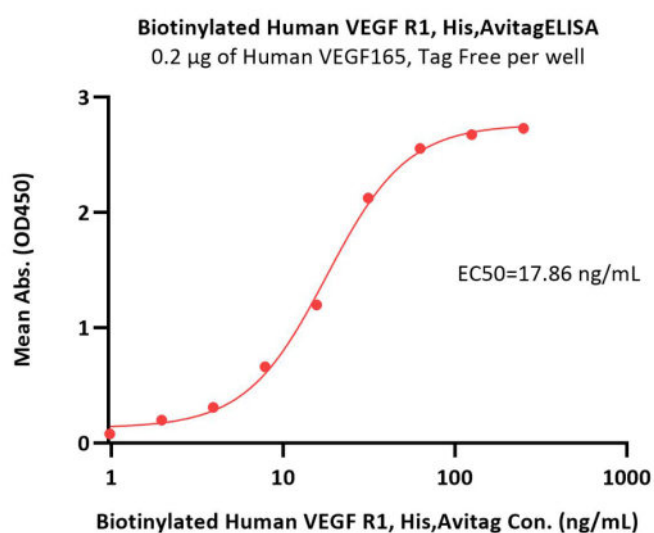
This product is stable after storage at:

- -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 VEGF R1, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

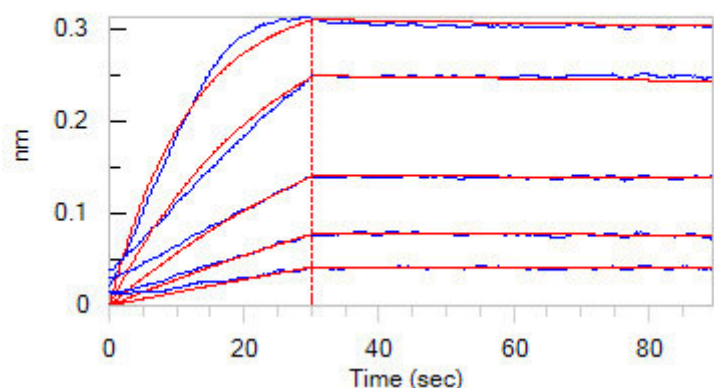
Bioactivity-ELISA



Immobilized Human VEGF165, premium grade (Cat. No. VE5-H4210) at 2 µg/mL (100 µL/well) can bind Biotinylated Human VEGF R1, His,Avitag (Cat. No. VE1-H82E3) with a linear range of 1-31 ng/mL (QC tested).

Immobilized Human PLGF, His Tag (Cat. No. PGF-H5229) at 1 µg/mL (100 µL/well) can bind Biotinylated Human VEGF R1, His,Avitag (Cat. No. VE1-H82E3) with a linear range of 2-20 ng/mL (Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Human VEGF R1, His,Avitag (Cat. No. VE1-H82E3) on SA Biosensor, can bind Human VEGF165, His Tag (Cat. No. VE5-H5248) with an affinity constant of 0.236 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

Vascular endothelial growth factor receptor 1 (VEGFR1) is also known as Fms-like tyrosine kinase 1 (FLT-1), Tyrosine-protein kinase receptor FLT, is a single-pass type I membrane protein and secreted protein which belongs to the protein kinase superfamily, Tyr protein kinase family and CSF-1/PDGF receptor subfamily. VEGFR1 is detected in normal lung, but also in placenta, liver, kidney, heart and brain tissues and specifically expressed in most of the vascular endothelial cells, and also expressed in peripheral blood monocytes. VEGFR1 acts as a cell-surface receptor for VEGFA, VEGFB and PGF, and plays an essential role in the development of embryonic vasculature, the regulation of angiogenesis, cell survival, cell migration, macrophage function, chemotaxis, and cancer cell invasion. VEGFR1 may play an essential role as a negative regulator of embryonic angiogenesis by inhibiting excessive proliferation of endothelial cells. VEGFR1 can promote endothelial cell proliferation, survival and angiogenesis in adulthood.

Clinical and Translational Updates

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