

Synonym

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

Source

Biotinylated Mouse VEGF164, His,Avitag(VE4-M82Q3) is expressed from human 293 cells (HEK293). It contains AA Ala 27 - Arg 190 (Accession # [Q00731-2](#)).

Predicted N-terminus: His

Molecular Characterization



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

The protein has a calculated MW of 22.5 kDa. The protein migrates as 28-33 kDa under reducing (R) condition, and 46-60 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE) due to different 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.

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

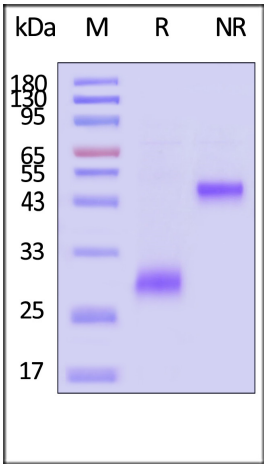
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

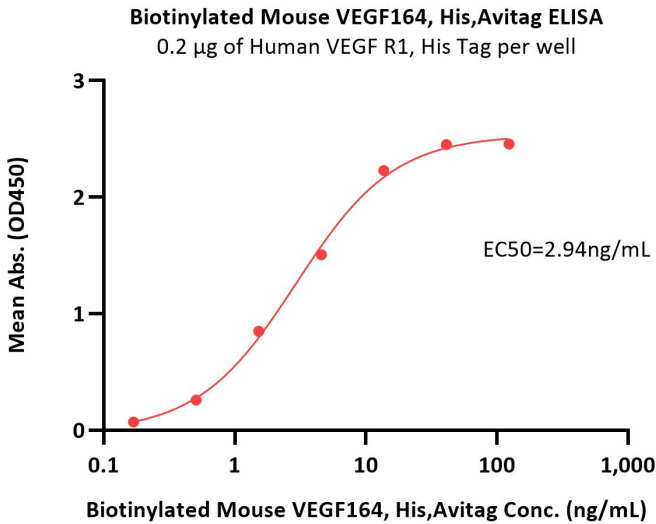
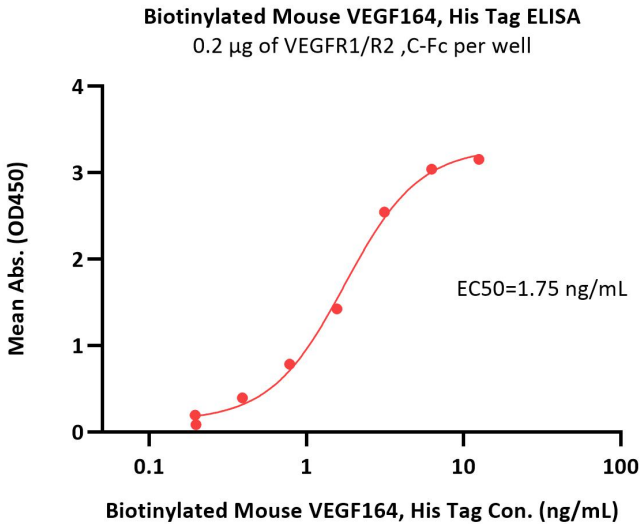
SDS-PAGE



Biotinylated Mouse VEGF164, His,Avitag 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% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-ELISA

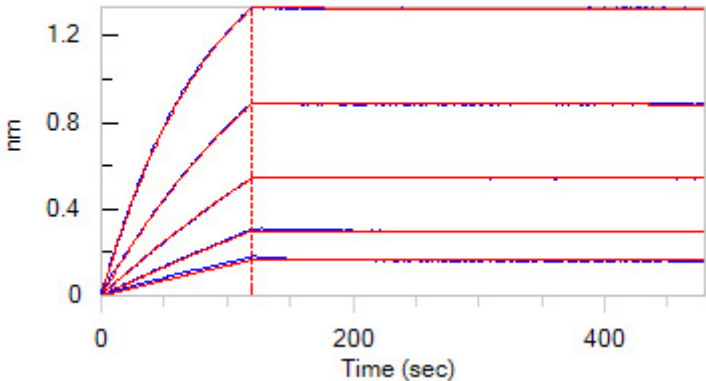




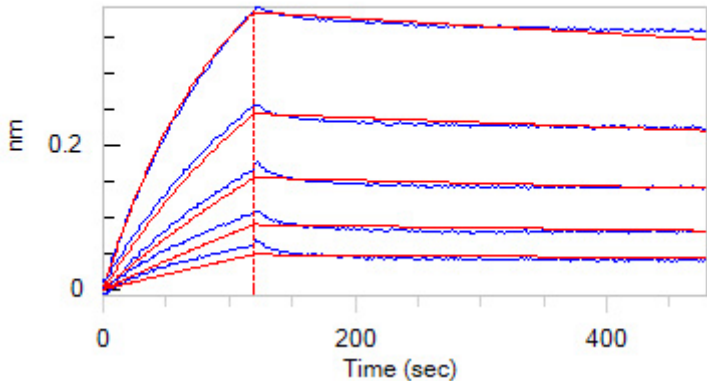
Immobilized VEGFR1/R2 ,C-Fc at 2 µg/mL (100 µL/well) can bind Biotinylated Mouse VEGF164, His,Avitag (Cat. No. VE4-M82Q3) with a linear range of 0.1-3 ng/mL (QC tested).

Immobilized Human VEGF R1, His Tag at 2 µg/mL (100 µL/well) can bind Biotinylated Mouse VEGF164, His,Avitag (Cat. No. VE4-M82Q3) with a linear range of 0.2-5 ng/mL (Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Mouse VEGF164, His,Avitag (Cat. No. VE4-M82Q3) on SA Biosensor, can bind Mouse VEGF R1, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. VE1-M5256) with an affinity constant of 42.4 pM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Biotinylated Mouse VEGF164, His,Avitag (Cat. No. VE4-M82Q3) on SA Biosensor, can bind Mouse VEGF R2, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. VE2-M5258) with an affinity constant of 1.33 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

Vascular endothelial growth factor A (VEGFA) is also known as Vascular permeability factor (VPF). VEGFA belongs to the PDGF/VEGF growth factor family. VEGFA 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. VEGFA is produced by a group of three major isoforms as a result of alternative splicing and if any three isoforms are produced (VEGFA120, VEGFA164, and VEGFA188) then this will not result in vessel defects and death of the full VEGFA knockout in mice.

