

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. As a result of different glycosylation, the protein migrates as 28-33 kDa under reducing (R) condition, and 46-60 kDa under non-reducing (NR) condition (SDS-PAGE).

Biotinylation

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

Biotin:Protein Ratio

The biotin to protein ratio is *0.5-1* as determined by the HABA assay.

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. Normally trehalose is added as protectant before lyophilization.

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

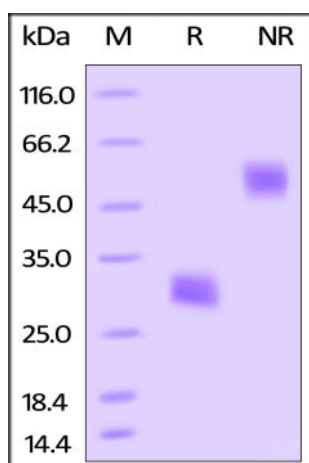
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

No activity loss was observed after storage at:

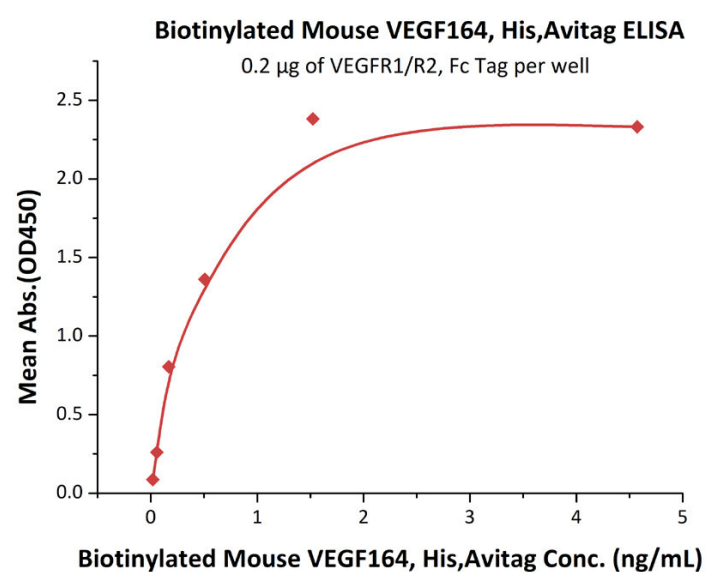
- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

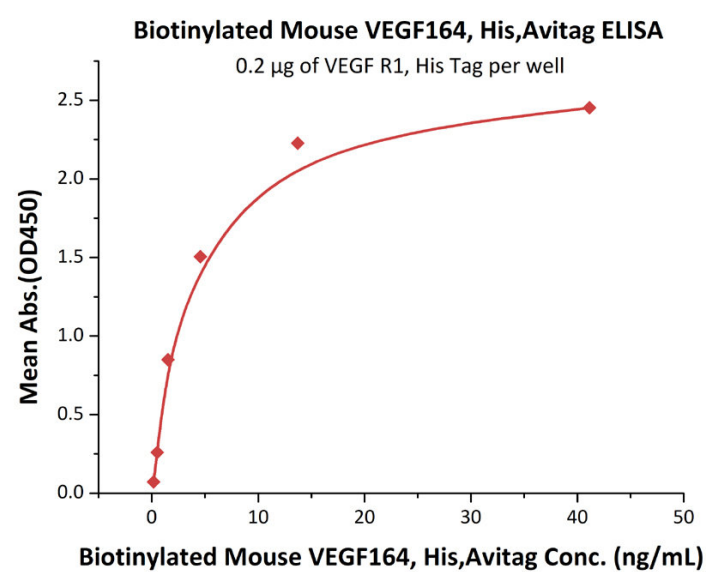


Biotinylated Mouse VEGF164, His,Avitag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Immobilized VEGFR1/R2, Fc Tag at 2 µg/mL (100 µL/well) can bind Biotinylated Mouse VEGF164, His,Avitag (Cat. No. [VE4-M82Q3](#)) with a linear range of 0.02-0.5 ng/mL (QC tested).



Immobilized Human VEGF R1, His Tag (Cat. No. [VE1-H5220](#)) at 2 µg/mL (100 µL/well) can bind Biotinylated Mouse VEGF164, His,Avitag (Cat. No. [VE4-M82Q3](#)) with a linear range of 0.2-2 ng/mL (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.

References

- (1) [Shin S.-Y., et al., 2005, Yonsei Med. J. 46:679-686.](#)
- (2) [Breier G., et al., 1992, Development 114:521-532.](#)

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