

Synonym

VRF, VEGFL, VEGFB, VEGF-B

Source

Human VEGF-B, His Tag(VE6-H5225) is expressed from human 293 cells (HEK293). It contains AA Pro 22 - Ala 207 (Accession # [P49765-1](#)).

Predicted N-terminus: Pro 22

Molecular Characterization

VEGF-B(Pro 22 - Ala 207)
P49765-1 Poly-his

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 20.3 kDa. The protein migrates as 16 kDa and 34-40 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

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.

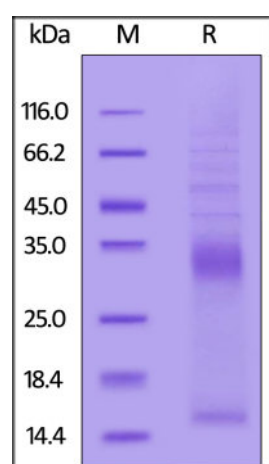
Storage

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

Please avoid repeated freeze-thaw cycles.

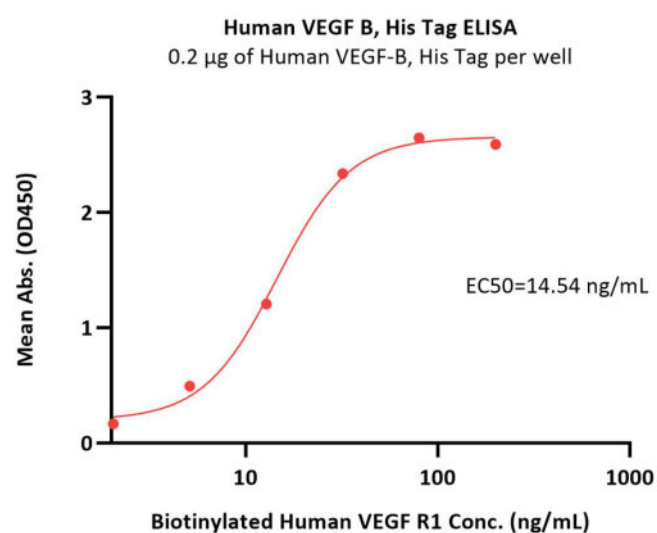
This product is stable after storage at:

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

SDS-PAGE

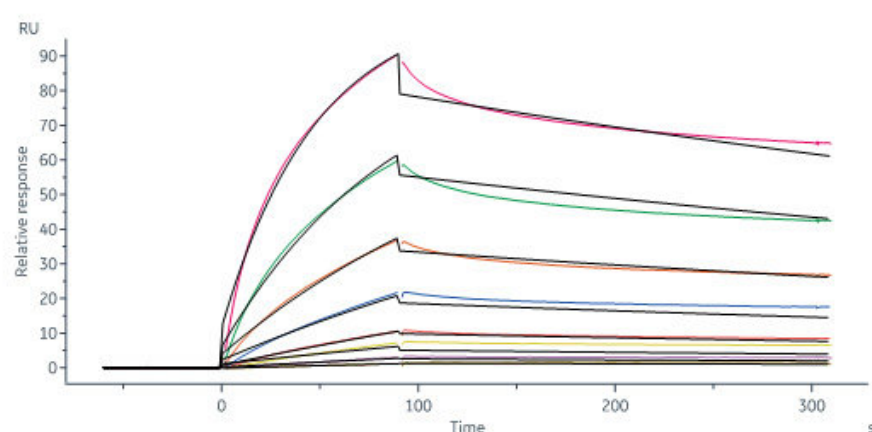
Human VEGF-B, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

Bioactivity-ELISA

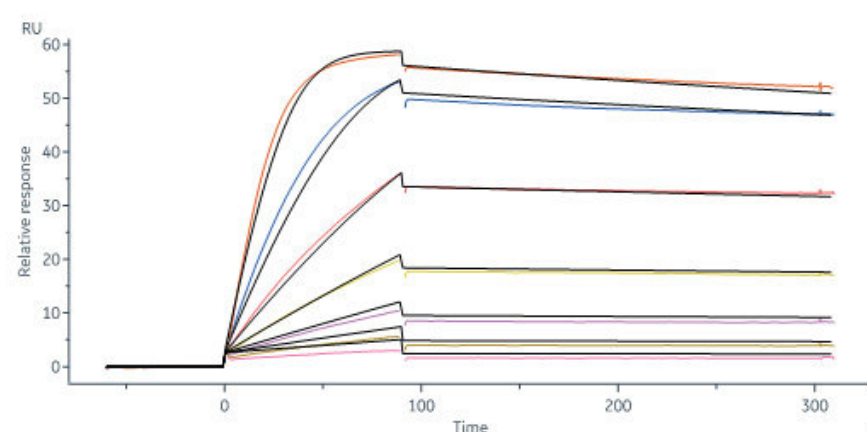


Immobilized Human VEGF-B, His Tag (Cat. No. VE6-H5225) at 2 µg/mL (100 µL/well) can bind Biotinylated Human VEGF R1 with a linear range of 2-32 ng/mL (QC tested).

Bioactivity-SPR



Human NRP1, Fc Tag (Cat. No. NR1-H5252) captured on Protein A Chip can bind Human VEGF-B, His Tag (Cat. No. VE6-H5225) with an affinity constant of 23.8 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).



Human VEGF R1 Protein, Fc Tag (Cat. No. VE1-H5253) captured on Protein A Chip can bind Human VEGF-B, His Tag (Cat. No. VE6-H5225) with an affinity constant of 0.52 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

Vascular endothelial growth factor B (VEGFB) is also known as VEGF-related factor (VRF), is a secreted O-glycosylated protein, which belongs to the PDGF/VEGF growth factor family. VEGFB is expressed in all tissues except liver. Highest levels found in heart, skeletal muscle and pancreas. VEGFB is growth factor for endothelial cells. VEGF-B seems to play a role only in the maintenance of newly formed blood vessels during pathological conditions. VEGF-B also plays an important role on several types of neurons. It is important for the protection of neurons in the retina and the cerebral cortex during stroke and of motoneurons during motor neuron diseases such as amyotrophic lateral sclerosis. VEGF-B167 binds heparin and neuropilin-1 whereas the binding to neuropilin-1 of VEGF-B186 is regulated by proteolysis.

Clinical and Translational Updates

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