

Synonym

NRP1,Neuropilin-1,NRP,VEGF165R,CD304

Source

Human Neuropilin-1, His Tag(NR1-H5228) is expressed from human 293 cells (HEK293). It contains AA Phe 22 - Lys 644 (Accession # [AAH07533.1](#)).

Predicted N-terminus: Phe 22

Molecular Characterization

NRP1(Phe 22 - Lys 644)
AAH07533.1 Poly-his

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 70.8 kDa. The protein migrates as 75-116 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>92% 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.

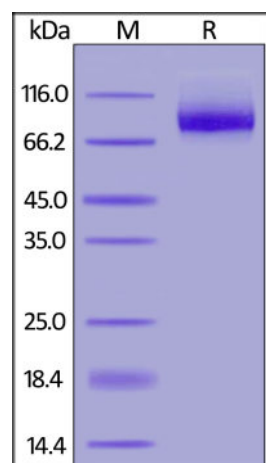
Storage

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.

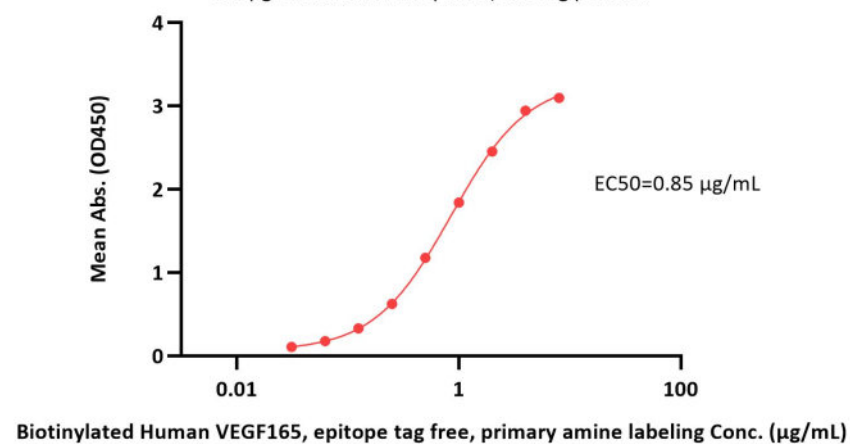
SDS-PAGE

Human Neuropilin-1, His Tag on SDS-PAGE under reducing (R) condition.

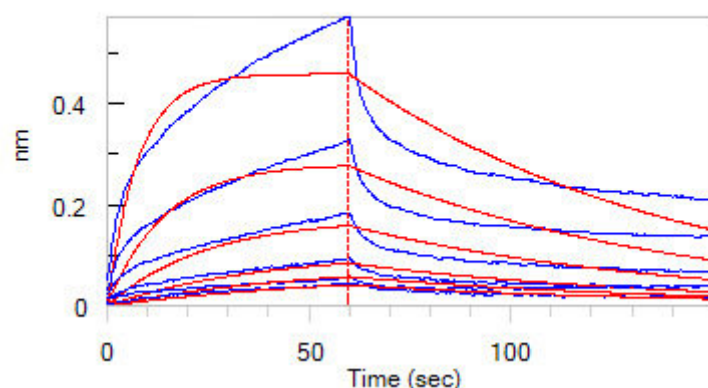
The gel was stained with Coomassie Blue. The purity of the protein is greater than 92%.

Bioactivity-ELISA

Biotinylated Human VEGF165, epitope tag free, primary amine labeling ELISA

0.2 μg of Human Neuropilin-1, His Tag per well

Immobilized Human Neuropilin-1, His Tag (Cat. No. NR1-H5228) at 2 $\mu\text{g}/\text{mL}$ (100 $\mu\text{L}/\text{well}$) can bind Biotinylated Human VEGF165, epitope tag free, primary amine labeling (Cat. No. VE5-H8210) with a linear range of 0.031-2 $\mu\text{g}/\text{mL}$ (QC tested).

Bioactivity-BLI

Loaded Biotinylated Human VEGF165, His,Avitag (Cat. No. VE5-H82Q0) on SA Biosensor, can bind Human Neuropilin-1, His Tag (Cat. No. NR1-H5228) with an affinity constant of 21.1 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

Neuropilin-1 (NRP1) is also known as Vascular endothelial cell growth factor 165 receptor (VEGF165R), CD antigen CD304, which belongs to the neuropilin family. The membrane-bound isoform 1 is a receptor involved in the development of the cardiovascular system, in angiogenesis, in the formation of certain neuronal circuits and in organogenesis outside the nervous system. It mediates the chemorepulsant activity of semaphorins. It binds to semaphorin 3A, The PLGF-2 isoform of PGF, The VEGF-165 isoform of VEGF and VEGF-B. Coexpression with KDR results in increased VEGF-165 binding to KDR as well as increased chemotaxis. It may regulate VEGF-induced angiogenesis. The soluble isoform 2 binds VEGF-165 and appears to inhibit its binding to cells.

Clinical and Translational Updates

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