

**Synonym**

NRP1,Neuropilin-1,NRP,VEGF165R,CD304

**Source**Human NRP1, Fc Tag(NR1-H5252) is expressed from human 293 cells (HEK293). It contains AA Phe 22 - Lys 644 (Accession # [AAH07533](#) ).

Predicted N-terminus: Phe 22

**Molecular Characterization**

NRP1(Phe 22 - Lys 644) AAH07533	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc tag at the C-terminus

The protein has a calculated MW of 96.5 kDa. The protein migrates as 105-130 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

&gt;95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

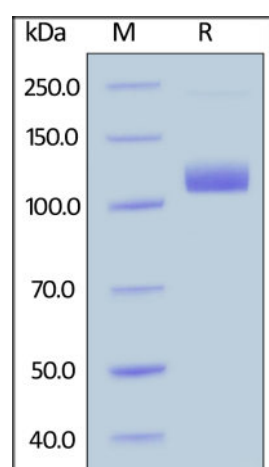
*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.***Storage**

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

*Please avoid repeated freeze-thaw cycles.*

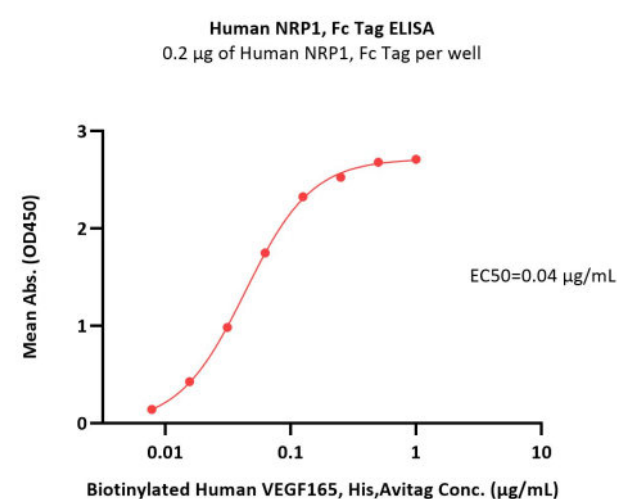
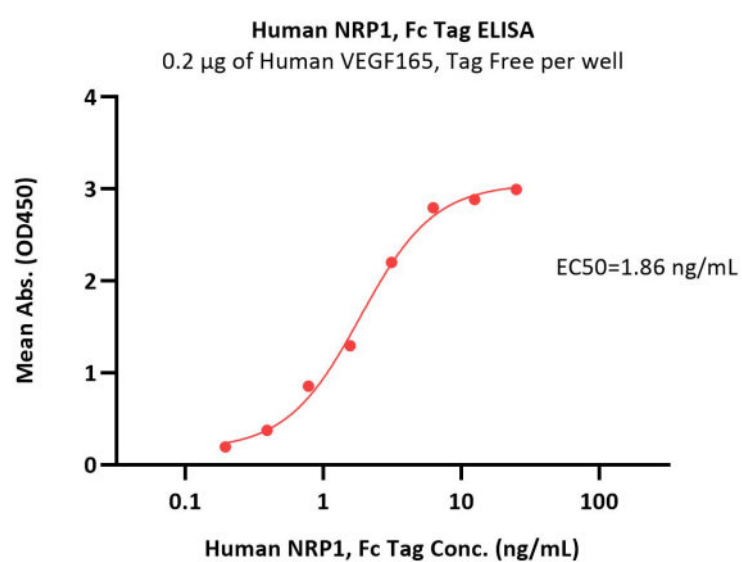
This product is stable after storage at:

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

**SDS-PAGE**

Human NRP1, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

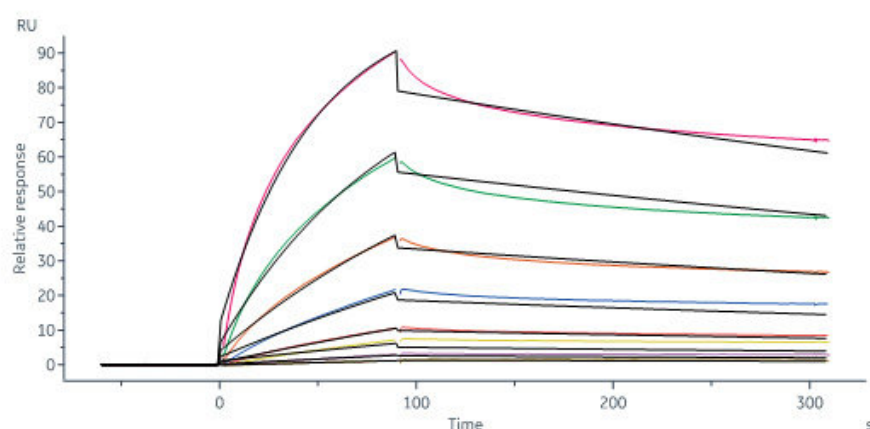
**Bioactivity-ELISA**



Immobilized Human VEGF165, premium grade (Cat. No. VE5-H4210) at 2 µg/mL (100 µL/well) can bind Human NRP1, Fc Tag (Cat. No. NR1-H5252) with a linear range of 0.2-3 ng/mL (QC tested).

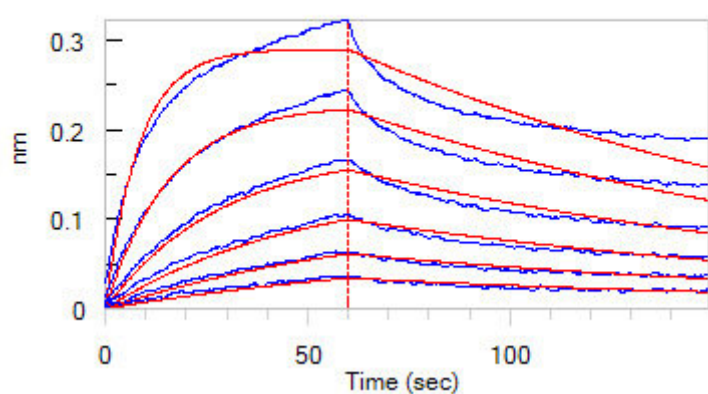
Immobilized Human NRP1, Fc Tag (Cat. No. NR1-H5252) at 2 µg/mL (100 µL/well) can bind Biotinylated Human VEGF165, His,Avitag (Cat. No. VE5-H82Q0) with a linear range of 0.008-0.25 µg/mL (Routinely tested).

**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).

**Bioactivity-BLI**



Loaded Human NRP1, Fc Tag (Cat. No. NR1-H5252) on Protein A Biosensor, can bind Human VEGF165, His Tag (Cat. No. VE5-H5248) with an affinity constant of 24.2 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](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.