

## Neuropilin-1 Protein, Human, Recombinant (aa 22-644, Avi &amp; His), Biotinylated

## General Information

Synonyms:	CD304;VEGF165R;NRP1;NRPNP1;BDCA4
Protein Construction:	Phe22-Lys644
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAH07533.1
Molecular Weight:	85-100 KDa (reducing condition)
AA Sequence:	Phe22-Lys644

## QC Testing

Biological Activity:	Immobilized Anti-Human NRP1 mAb at 2µg/ml (100 µl/well) can bind Human Neuropilin-1-Avi-His. The ED50 of Human Neuropilin-1-Avi-His is 9.33 ng/ml. (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/µg (1 EU/µg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4.

## Preparation and Storage

## Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

## Stability &amp; Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

## Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

## Protein Background

Neuropilin-1 (Npn-1, previously neuropilin; also CD304) is a 130 - 140 kDa type I transmembrane (TM) glycoprotein that regulates axon guidance and angiogenesis. Two homologues, Neuropilin-1 and Neuropilin-2, are identified. Neuropilin-1 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. NRP1 expression is regulated in EC by tumor necrosis factor-alpha, the transcription factors dHAND and Ets-1, and vascular injury. NRP1 upregulation is positively correlated with the progression of various tumors.

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