

Neuropilin-1 Recombinant Protein | NRP1 recombinant protein

Neuropilin-1 Protein, Human, Recombinant (His Tag)

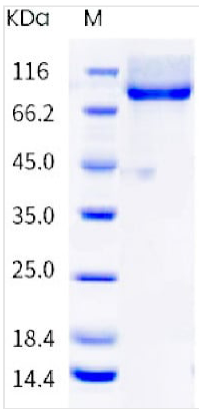
CATALOG # AAA258509	HOST HEK293 Cells	REACTIVITY Human
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PRODUCT SYNONYMS

Neuropilin-1; Neuropilin-1 Protein; Human; Recombinant (His Tag); Human Neuropilin-1(N150Q) Protein (His Tag); BDCA4 Protein; CD304 Protein; NP1 Protein; NRP Protein; VEGF165R Protein; neuropilin 1; NRP1 recombinant protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Reactivity	Human
Purity/Purification	>95% as determined by SDS-PAGE.
Form/Format	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization
Endotoxin	<1.0EU per ug protein as determined by the LAL method.
Tag	His
Predicted N Terminal	Phe 22
Protein Construction	A DNA sequence encoding the human NRP1 (NP_001019799.2, with mutations N150Q)(Met1-Lys644) was expressed with a polyhistidine tag at the C-terminus.
Reconstitution	It is recommended that sterile water (400ul) be added to the vial to prepare a stock solution of 0.25mg/mL. Concentration is measured by UV.
Bio Activity	Immobilized VEGF165 Protein, Human, Cynomolgus, Recombinant (Cat:) at 2 ug/mL (100 uL/well) can bind Neuropilin-1 Protein, Human, Recombinant (His Tag) , the EC50 is 6-32 ng/mL.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20°C to -80°C. Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.



Application Data

ADDITIONAL INFORMATION

Related Product Information for NRP1 recombinant protein	Neuropilin is a type I transmembrane protein and the molecular mass is 120 kDa. Two homologs, Neuropilin-1 and Neuropilin-2, are identified. The primary structure of Neuropilin-1 and Neuropilin-2 is well conserved and is divided into four domains, CUB (a1/a2) domain, FV/FVIII (b1/b2) domain, MAM (c) domain, and (d) domain that contains a transmembrane and a short cytoplasmic region. Neuropilin-1 (NRP1) acts as a receptor for two different extracellular ligands, class 3 semaphorins, and specific isoforms of vascular endothelial growth factor. The functions of NRP1 and NRP2 have been extensively studied in neurons where they act in axon guidance and in endothelial cells where they promote angiogenesis and cell migration. Neuropilin-1 is likely to mediate contacts between the dendritic cells and the T lymphocytes via homotypic interactions and is essential for the initiation of the primary immune response. NRP1 is a co-receptor for VEGF receptor-2 (VEGFR2) that enhances the binding of VEGF165 to VEGFR2 and VEGF165-mediated chemotaxis. 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. Overexpression of NRPI in rat tumor cells results in enlarged tumors and substantially enhanced tumor angiogenesis. On the other hand, soluble NRP1 (sNRP1) is an antagonist of tumor angiogenesis.
References	Nakamura F, et al. (2002) Structural and functional relation of neuropilins. Adv Exp Med Biol. 515: 55-69.Romeo PH, et al. (2002) Neuropilin-1 in the immune system. Adv Exp Med Biol. 515: 49-54.Klagsbrun M, et al. (2002) The role of neuropilin in vascular and tumor biology. Adv Exp Med Biol. 515: 33-48.Staton CA, et al. (2007) Neuropilins in physiological and pathological angiogenesis. J Pathol. 212(3): 237-48.Bagri A, et al. (2009) Neuropilins in tumor biology. Clin Cancer Res. 15(6): 1860-4.

NCBI AND UNIPROT INFORMATION

Molecular Weight	The recombinant human NRP1 consists of 634 amino acids and predicts a molecular mass of 71.31kDa. It migrates as an approximately 86.3kDa band in SDS-PAGE under reducing conditions.
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For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.