

NRP-1, soluble Active Protein | NRP-1 active protein

Recombinant Human Soluble Neuropilin-1

CATALOG #
AAA14949

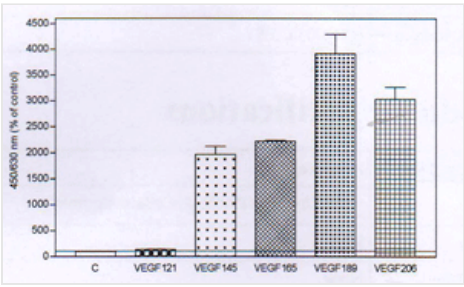
HOST
Insect cells

PRODUCT SYNONYMS

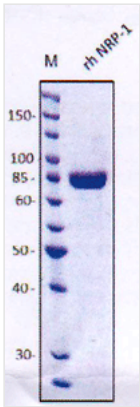
NRP-1; soluble; Recombinant Human Soluble Neuropilin-1; Vascular endothelial growth factor 165 receptor; CD304; VEGF165R; NRP; NRP-1 active protein

PRODUCT SPECIFICATIONS

Host	Insect cells
Purity/Purification	>98% by SDS-PAGE & Coomassie stain
Form/Format	Lyophilized; PBS
Sequence	FRNDKCGDTI KIESPGYLTS PGYPHSYHPS EKCEWLIQAP DPYQRIMINF NPHFDLED RD CKYDYVEVFD GENENGHFRG KFCGKIAPPP VVSSGPFLFI KVVSDYETHG AGFSIRYEIF KRGPECSQNY TTPSGVIKSP GFPEKYPNSL ECTYIVFAPK MSEIILEFES FDLEPDSNPP GGMFCRYDRL EIWDGFPDVG PHIGRYCGQK TPGRIRSSSG ILSMVFYTDS AIAKEGFSAN YSVLQSSVSE DFKCMEALGM ESGEIHSDQI TASSQYSTNW SAERSRLNYP ENGWTPEGDS YREWIQVDLG LLRFVTAVGT QGAISKETKK KYYVKTYKID VSSNGEDWIT IKEGNKPVLV QGNTNPTDVV VAVFPKPLIT RFVRIKPATW ETGISMRFEV YGCKITDYPC SGMLGMVSGL ISDSQITSSN QGDRNWMPEN IRLVTSRSGW ALPPAPHSYI NEWLQIDLGE EKIVRGIIIQ GGHRENKVF MRKFKIGYSN NGSDWKIMMD DSKRKAKSFE GNNNYDTPEL RTFPALSTRF IRIYPERATH GGLGLRMELL GCEVEAPTAG PTPPNGNLVD ECDDQANCH SGTGDDFQLT GGTTVLATEK PTVIDSTIQS GIKLEHHHHH H
Sequence Length	644
Result by N-Terminal Sequencing	FRNDKCGDTI
Protein RefSeq	NP_003864.4
mRNA RefSeq	NM_003873.5
Stabilizer	None
Length (aa)	631
Reconstitution	The lyophilized human sNRP-1 is soluble in water and most aqueous buffers; it should be reconstituted in water or PBS to a concentration of not lower than 100ug/ml.
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized soluble Neuropilin-1 binds all VEGF-A isoforms with the exception of VEGF ₁₂₁ .
Preparation and Storage	The material is stable for greater than six months at -20° C to -70° C. After the first thawing it is recommended to aliquot the material, because repeated freeze-thaw cycles will decrease the activity. Store at 4°C not longer than 2 days.



ELISA
Fig 2: Binding of VEGF-A isoforms to recombinant human soluble Neuropilin-1 receptor (NRP-1) in a functional ELISA. NRP-1 was coated with 1ug/ml (100ul/well), the ligands were added with 10ng/ml.



SDS-PAGE
Fig:1 SDS-PAGE analysis of recombinant human soluble NRP-1. Sample was loaded in 10% SDS-polyacrylamide gel under reducing conditions and stained with Coomassie blue.

ADDITIONAL INFORMATION

Related Product Information for NRP-1 active protein	Neuropilin-1 (NRP-1, CD304) is a 130-140 kDa type I transmembrane glycoprotein that regulates axon guidance and angiogenesis. The human NRP-1 contains a 623 aa extracellular domain (ECD) that shows 92-95% aa identity with mouse, rat, bovine and canine NRP-1. The ECD contains two N-terminal CUB domains (termed a1a2), two domains with homology to coagulation factors V and VIII (b1b2) and a MAM (meprin) domain. C-terminally divergent splice variants with 704, 644, 609, and 551 aa lack the MAM and TM domains and are demonstrated or presumed to be soluble antagonists. Heparin, the heparin-binding forms of VEGF (VEGF165, VEGF-B; VEGF-E), PlGF-2, and the C-terminus of Sema3 bind the b1b2 region. NRP-1 and NRP-2 share 48% aa identity within the ECD and can form homo and hetero-oligomers via interaction of their MAM domains. Neuropilins show partially overlapping expression in neuronal and endothelial cells during development. Both neuropilins act as coreceptors with Plexins, mainly Plexin A3 and A4, to bind class III Semaphorins that mediate axon repulsion. However, only NRP-1 binds Sema3A, and only NRP-2 binds Sema 3F. Both are co-receptors with VEGFR-2 (KDR7Flk1) for VEGF165 binding. Sema 3A signaling can be blocked by VEGF165, which has higher affinity for NRP-1. NRP-1 is preferentially expressed in arteries during development or those undergoing remodeling. NRP-1 is also expressed on dendritic cells and mediates DC-induced T-cell proliferation.
Product Categories/Family for NRP-1 active protein	Soluble receptors

NCBI AND UNIPROT INFORMATION

NCBI GI #	66912178
NCBI GeneID	8829
NCBI Accession #	NP_001019799.1
NCBI GenBank Nucleotide #	NM_001024628.2
UniProt Accession #	O14786; O60461; Q5T7F1; Q5T7F2; Q5T7F3; Q86T59; Q96I90; Q96IH5; B0LPG9
Molecular Weight	82,6 kDa
NCBI Official Full Name	neuropilin-1 isoform b
NCBI Official Synonym Full Names	neuropilin 1
NCBI Official Symbol	NRP1
NCBI Official Synonym Symbols	NP1; NRP; BDCA4; CD304; VEGF165R
NCBI Protein Information	neuropilin-1; transmembrane receptor; vascular endothelial cell growth factor 165 receptor
UniProt Protein Name	Neuropilin-1

UniProt Gene Name	NRP1
UniProt Synonym Gene Names	NRP; VEGF165R
UniProt Entry Name	NRP1_HUMAN

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.

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Online datasheet: <https://www.aaabiotech.com/insect-active-protein/nrp-1-soluble/14949>