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Datasheet for ABIN7539342

**Neuropilin 1 Protein (NRP1) (Soluble) (His tag)**

## Overview

Quantity:	5 µg
Target:	Neuropilin 1 (NRP1)
Protein Characteristics:	Soluble
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This Neuropilin 1 protein is labelled with His tag.

## Product Details

Purpose:	NRP-1, soluble
Sequence:	FRNDKCGDTI KIESPGYLTS PGYPHSYHPS EKCEWLIQAP DPYQRIMINF NPHFDLEDRD CKYDYVEVFD GENENGHFRG KFCGKIAPPP VSSGPFLFI KFSVDYETHG AGFSIRYEIF KRGPECSQNY TTPSGVIKSP GFPEKYPNSL ECTYIVFAPK MSEIILEFES FDLEPDSNPP GGMFCRYDRL EIWDGFPDVG PHIGRYCGQK TPGRIRSSSG ILSMVFYTDS AIAKEGFSAN YSVLQSSVSE DFKCMEALGM ESGEIHSQI TASSQYSTNW SAERSRLNYP ENGWTPGEDS YREWIQVDLG LLRFVTAVGT QGAISKETKK KYVVKTYKID VSSNGEDWIT IKEGNKPVLF QGNTNPTDVV VAVFPKPLIT RFVRIKPATW ETGISMRFEV YGCKITDYPC SGMLGMVSGL ISDSQITSSN QGDRNWMPEN IRLVTSRSGW ALPPAPHSYI NEWLQIDLGE EKIVRGIIIQ GGKHRENKVF MRKFKIGYSN NGSDWKMIMD DSKRKAJSFE GNNNYDTPPEL RTFPALSTRF IRIYPERATH GGLGLRMELL GCEVEAPTAG PTPNGNLVD ECDDQANCH SGTGDDFQLT GGTTVLATEK PTVIDSTIQS GIKLEHHHHH H

## Product Details

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Specificity: Chromosomal location:10p12

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Characteristics: Length (aa):631

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Purity: > 98 % by SDS-PAGE

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## Target Details

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Target: Neuropilin 1 (NRP1)

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Alternative Name: NRP-1 ([NRP1 Products](#))

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Background: Neuropilin receptor-1, VEGF165R, NRP, CD304, neuropilin,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

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Molecular Weight: 70.9 kDa

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Gene ID: 8829

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NCBI Accession: [NM\\_003873](#), [NP\\_003864](#)

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UniProt: [O14786](#)

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Pathways: [Regulation of Cell Size](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [Smooth Muscle Cell Migration](#), [Platelet-derived growth Factor Receptor Signaling](#), [VEGFR1 Specific Signals](#)

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## Application Details

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Application Notes: Measured by its binding ability in a functional ELISA. Immobilized soluble Neuropilin-1 binds all VEGF-A isoforms with the exception of VEGF121.

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Restrictions: For Research Use only

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## Handling

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Format: Lyophilized

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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 100 µg/mL.