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# Datasheet for ABIN2859216 Neuropilin 1 ELISA Kit

Image



#### Overview

Quantity:	96 tests
Target:	Neuropilin 1 (NRP1)
Binding Specificity:	AA 22-854
Reactivity:	Rat
Method Type:	Sandwich ELISA
Detection Range:	780-50.000 pg/mL
Minimum Detection Limit:	780 pg/mL
Application:	ELISA

### Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Rat Neuropilin-1			
Brand:	PicoKine™			
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)			
Analytical Method:	Quantitative			
Detection Method:	Colorimetric			
Immunogen:	Expression system for standard: NSO			
	Immunogen sequence: F22-D854			
Specificity:	Expression system for standard: NSO			
	Immunogen sequence: F22-D854			
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.			

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Product D	etails
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Sensitivity:	<20pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette
	tips. Multichannel pipettes are recommended in the condition of large amount of samples in the
	detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation
	of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

# Target Details

Target:	Neuropilin 1 (NRP1)		
Alternative Name:	NRP1 (NRP1 Products)		
Background:	Protein Function: 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 (By similarity)		
	Background: NRP1(Neuropilin 1) also known as NP1, NRP, BDCA4 or VEGF165R, is a		
	membrane-bound coreceptor to a tyrosine kinase receptor for both vascular endothelial growt		
	factor (VEGF) and semaphorin family members. NRP1 plays versatile roles in angiogenesis,		
	axon guidance, cell survival, migration, and invasion. By somatic cell hybrid analysis, the NRP1		
	gene was mapped to chromosome 10. NRP1 bounds PGF1 with lower affinity. NRP1-mediated		
	interactions are a necessary element in the initiation of the primary immune response and offer		
	another example, like that of agrin, of a molecule shared by neurologic and immunologic		
	synapses. After T-cell contact with DC, T-cell NRP1 colocalized with CD3 in the immunologic		
	synapse and, sometimes, also at the opposite pole of the T cell. Soluble NRP1 interacts in a		
	homophilic fashion with NRP1 on both DC and T cells, and this binding can be inhibited by		
	blocking antibodies to NRP1. Furthermore, selective NRP1 inhibition in this model suppressed		
	neovascular formation substantially.		
	Synonyms: Neuropilin-1,Vascular endothelial cell growth factor 165 receptor,CD304,Nrp1,		
	Full Gene Name: Neuropilin-1		
	Cellular Localisation: Membrane, Single-pass type I membrane protein.		
Gene ID:	246331		
UniProt:	Q9QWJ9		
Pathways:	Regulation of Cell Size, Signaling Events mediated by VEGFR1 and VEGFR2, Smooth Muscle		

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#### Cell Migration, Platelet-derived growth Factor Receptor Signaling, VEGFR1 Specific Signals

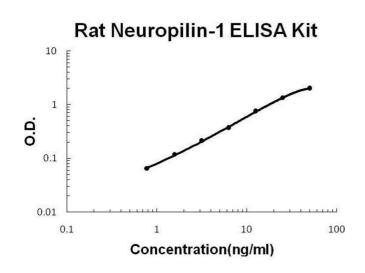
## Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well
	assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Belongs to the neuropilin family.
	Tissue Specificity: Found in the embryonic nervous system.
Plate:	Pre-coated
Protocol:	rat Neuropilin-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent
	assay technology. A monoclonal antibody from mouse specific for Neuropilin-1 has been
	precoated onto 96-well plates. Standards(NSO, F22-D854) and test samples are added to the
	wells, a biotinylated detection polyclonal antibody from goat specific for Neuropilin-1 is added
	subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase
	Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP
	substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to
	produce a blue color product that changed into yellow after adding acidic stop solution. The
	density of yellow is proportional to the rat Neuropilin-1 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 50 ng/mL, 25 ng/mL, 12.5 ng/mL, 6.25 ng/mL, 3.12 ng/mL,
Assay Flocedule.	
	1.56 ng/mL, 0.78 ng/mL rat Neuropilin-1 standard solutions into the precoated 96-well plate.
	Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each
	properly diluted sample of rat cell culture supernates, serum or plasma(heparin, EDTA) to each
	empty well. See "Sample Dilution Guideline" above for details. We recommend that each rat
	Neuropilin-1 standard solution and each sample is measured in duplicate.
Assay Precision:	<ul> <li>Sample 1: n=16, Mean(ng/ml): 8.3, Standard deviation: 0.315, CV(%): 3.8</li> </ul>
	<ul> <li>Sample 2: n=16, Mean(ng/ml): 21, Standard deviation: 0.987, CV(%): 4.7</li> </ul>
	<ul> <li>Sample 3: n=16, Mean(ng/ml): 30, Standard deviation: 1.62, CV(%): 5.4,</li> </ul>
	<ul> <li>Sample 1: n=24, Mean(ng/ml): 8.6, Standard deviation: 0.421, CV(%): 4.9</li> </ul>
	<ul> <li>Sample 2: n=24, Mean(ng/ml): 24, Standard deviation: 1.32, CV(%): 5.5</li> </ul>
	<ul> <li>Sample 3: n=24, Mean(ng/ml): 35, Standard deviation: 2.38, CV(%): 6.8</li> </ul>
Restrictions:	For Research Use only
Handling	
Handling Advice:	Avoid multiple freeze-thaw cycles.

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Handling	
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Images



ELISA						
Image 1.	Rat	Neuropilin-1	PicoKine	ELISA	Kit	standard
curve						

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