

DESCRIPTION	
Species Reactivity	Mouse/Rat
Specificity	Detects mouse and rat Neuropilin-1 in direct ELISAs and Western blots. In direct ELISAs less than 1% cross-reactivity with recombinant rat Neuropilin-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat Neuropilin-1 Phe22-Ala810 (Lys811Arg), Ser829-Asp854 Accession # Q9QWJ9
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	See Below
Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
Immunohistochemistry	3-15 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Blockade of Receptor-ligand Interaction	In a functional ELISA, 0.3-1 µg/mL of this antibody will block 50% of the binding of 20 ng/mL of Recombinant Human VEGF ₁₆₅ (Catalog # 293-VE) to immobilized Recombinant Rat Neuropilin-1 Fc Chimera (Catalog # 566-NNS) coated at 2 µg/mL (100 µL/well). At 30 µg/mL, this antibody will block >90% of the binding. Also, 1-5 µg/mL of this antibody will block 50% of the binding of 50 ng/mL of Recombinant Human Semaphorin 3A Fc Chimera (Catalog # 1250-S3) to immobilized Recombinant Rat Neuropilin-1 Fc Chimera (Catalog # 566-NNS) coated at 2 µg/mL (100 µL/well).	

DATA

Western Blot

Detection of Recombinant Human, Mouse, and Rat Neuropilin-1 by Western Blot. Western blot shows 25 ng of Recombinant Mouse Neuropilin-1 (Catalog # 5994-N1), Recombinant Rat Neuropilin-1 Fc Chimera (Catalog # 566-N1) and Recombinant Human Neuropilin-1 (Catalog # 3870-N1). PVDF Membrane was probed with 0.1 µg/mL of Goat Anti-Mouse/Rat Neuropilin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF566) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for Neuropilin-1 at approximately 150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry

Detection of Neuropilin-1 in bEnd.3 Mouse Cell Line by Flow Cytometry. bEnd.3 mouse endothelioma cell line was stained with Goat Anti-Rat Neuropilin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF566, filled histogram) or isotype control antibody (Catalog # AB-106-C, open histogram), followed by Allophycocyanin-conjugated Anti-Goat IgG Secondary Antibody (Catalog # F0108).

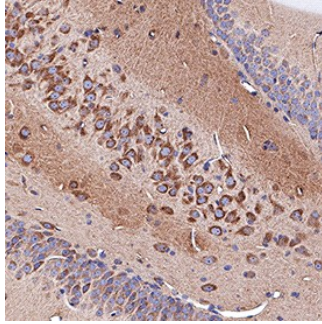
Immunohistochemistry

Neuropilin-1 in Embryonic Rat Spinal Cord. Neuropilin-1 was detected in immersion fixed frozen sections of embryonic rat spinal cord (15 d.p.c.) using 5 µg/mL Goat Anti-Rat Neuropilin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF566) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

Immunohistochemistry

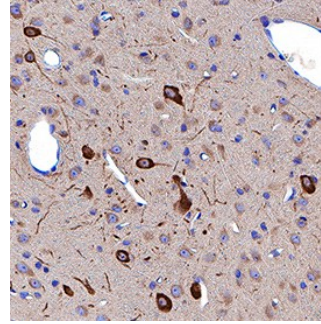
Neuropilin-1 in Rat Spinal Cord. Neuropilin-1 was detected in perfusion fixed frozen sections of rat spinal cord using Goat Anti-Rat Neuropilin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF566) at 15 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to the dorsal horn. View our protocol for Fluorescent IHC Staining of Frozen Tissue Sections.

Immunohistochemistry



Neuropilin-1 in Rat Brain. Neuropilin-1 was detected in immersion fixed paraffin-embedded sections of rat brain (hippocampus) using Goat Anti-Mouse/Rat Neuropilin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF566) at 3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in neuronal cell bodies and projections. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

Immunohistochemistry



Neuropilin-1 in Rat Brain. Neuropilin-1 was detected in immersion fixed paraffin-embedded sections of rat brain (thalamus) using Goat Anti-Mouse/Rat Neuropilin-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF566) at 3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in neuronal cell bodies and projections. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Neuropilin-1 is a type I transmembrane protein that is expressed in the developing nervous system and by endothelial and tumor cells. Neuropilin-1 binds members of the class III secreted semaphorin subfamily as well as some isoforms of VEGF family proteins. The amino acid sequence of rat Neuropilin-1 extracellular domain is 98% and 93% identical to that of mouse and human Neuropilin-1, respectively.

PRODUCT SPECIFIC NOTICES

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U.S. Patent # 6,054,293, 6,623,738, and other U.S. and international patents pending.