

DESCRIPTION

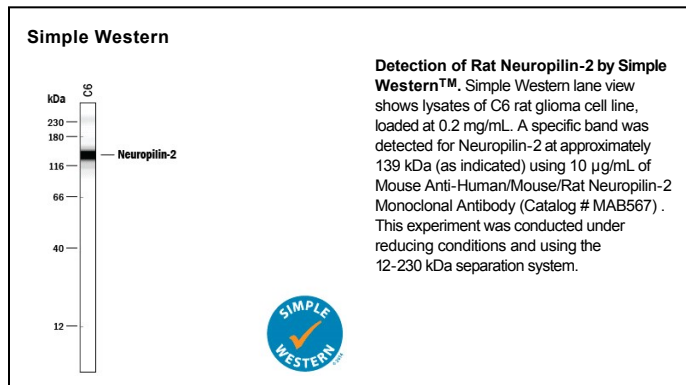
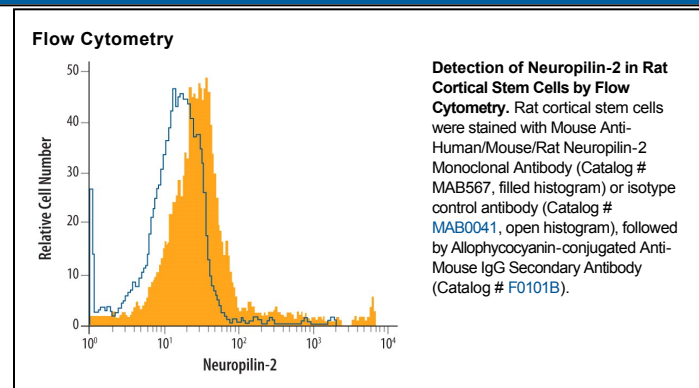
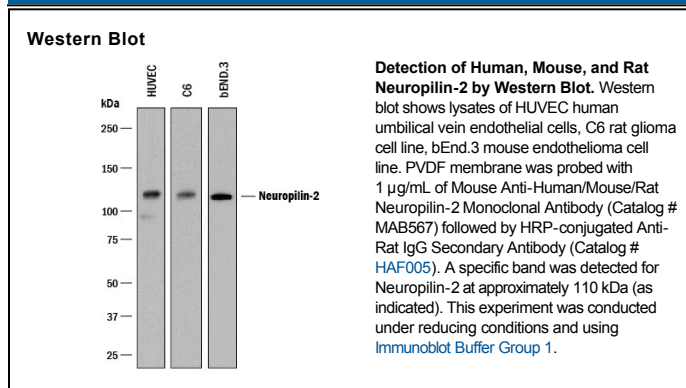
Species Reactivity	Human/Mouse/Rat
Specificity	Detects rat Neuropilin-2 in direct ELISAs and detects human, mouse, and rat Neuropilin-2 in Western blots. In direct ELISAs and Western blots, this antibody does not cross-react with recombinant human Neuropilin-1.
Source	Monoclonal Mouse IgG _{2B} Clone # 96009
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat Neuropilin-2 Gln23-Asp857 (Val809-Asp825 del) Accession # O35276
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	1 µg/mL	See Below
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
Simple Western	10 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.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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 (Npn-1, previously known as neuropilin) and Npn-2 (previously known as Npn-1-related molecule) are type I transmembrane proteins that bind members of the class III secreted semaphorin subfamily which are implicated in repulsive axon guidance. The extracellular domain of these proteins is composed of two N-terminal CUB (complement-binding) domains (domains a1 and a2), two domains with homology to coagulation factors V and VIII (domains b1 and b2) and a MAM (meprin) domain (domain c). In the absence of ligands, neuropilins can form homo- and hetero-oligomers via homophilic interactions of their MAM domains. At the amino acid sequence level, Npn-1 and Npn-2 share 44% identity. Npn-1 and Npn-2 show different binding specificities for different members of the semaphorin family. The expression patterns of Npn-1 and Npn-2 in developing neurons of the central and peripheral nervous systems are largely, though not completely non-overlapping. Npn-1 and Npn-2 are also expressed by endothelial and tumor cells and have been shown to be isoform-specific receptors for VEGF₁₆₅. Npn-1 was also reported to bind PIGF-2 and the VEGF-like protein from of virus NZ2.

References:

1. Fujisawa, H. and T. Kitsukawa (1998) *Curr. Opin. Neurobiol.* **8**:587.
2. Neufeld, G. *et al.* (1999) *FASEB J.* **13**:9.
3. Poltorak, Z. *et al.* (2000) *J. Biol. Chem.* **275**:18040.

PRODUCT SPECIFIC NOTICES

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