

Neuropilin-1 (a1 CUB Domain) Peptide

Cat. # NX2115

Size 50 µg

Background:

Neuropilins are transmembrane proteins that contain two CUB domains (a1 and a2), two coagulation factor-like domains (b1 and b2), and a MAM domain in the extracellular region. These proteins have short cytoplasmic domains that include a PDZ-binding motif. The neuropilin (NRP) family includes NRP-1, NRP-2A, and NRP-2B. NRP-1 has been implicated as a receptor involved in axon guidance and VEGF signaling. NRP-1 mediates activation of intracellular signaling pathways through interaction with its co-receptors, Plexin-A1 and VEGFRs. The expression of NRP-1, along with the co-receptor Plexin-A1, is upregulated in neurons after central nervous system injury. The axons from these neurons cannot cross semaphorin 3A-containing regions at the site of injury. Thus, semaphorin 3A and its co-receptors, Plexin-A1 and Neuropilin-1, may have significant roles in axon regeneration after neuronal injury.

References

- He, Z. & Tessier-Lavigne, M. (1997) Cell 90:739.
Nakamura, F. & Goshima, Y. (2002) Adv Exp Med Biol. 515:55.
Takahashi, T. et al. (1999) Cell 99:59.
Saban, M.R. et al. (2008) Am J Phys Renal Phys 295(1):F60 (ICC: H. Urothelium)

Peptide Sequence:

Neuropilin-1 synthetic peptide corresponds to amino acids within the a1 CUB domain of human neuropilin-1. This sequence is highly conserved in rat and mouse neuropilin-1, and has low homology to neuropilin-2.

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications:

Blocking 1:1,000
ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Specificity:

The peptide is specifically recognized by anti-Neuropilin 1 (a1 CUB domain) antibody (NP2111) in ELISA, and has been shown to block the reactivity of NP2111 in Western blot and immunocytochemistry applications.

Related Products:

- NP2111 Neuropilin-1 (a1 CUB Domain) Rabbit Polyclonal
SP1221 Semaphorin-3A (Central Region) Rabbit Polyclonal
SP1241 Semaphorin-3A (C-terminal) Rabbit Polyclonal
SM1881 Semaphorin-4D (C-terminal Region) Mouse Monoclonal
PP1301 Plexin A1 (Sema Domain) Rabbit Polyclonal
PP1841 Plexin B1 (C-terminal Region) Rabbit Polyclonal

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