

#3366 Store at -20C

Neuropilin-2 (D39A5) XP® Rabbit mAb



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TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IHC-P, IF-F	M R	Endogenous	130	Rabbit IgG	#O35375	18187

Product Usage Information

Application

Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:200 - 1:800
Immunofluorescence (Frozen)	1:500 - 1:2000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Neuropilin-2 (D39A5) XP® Rabbit mAb detects endogenous levels of total neuropilin-2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of mouse Neuropilin-2 protein.

Background

Class 3 secreted semaphorin (Sema3A) is a chemorepellent that acts upon a wide variety of axons. As such, it induces a dramatic redistribution and depolymerization of actin filaments that results in growth cone collapse. Plexins are single pass, transmembrane signaling proteins encompassing Plexin A1, A2, A3, and A4. Plexins form a complex with neuropilin-1 and -2 and the cell adhesion protein L1 to form a functional semaphorin receptor (1,2). The GTPase Rnd1 binds to the cytoplasmic domain of Plexin A1 to trigger cytoskeletal collapse. In contrast, the GTPase RhoD blocks Rnd1-mediated Plexin A1 activation and repulsion of sympathetic axons by Sema3A (3).

Neuropilin-2, a single pass, transmembrane glycoprotein, can also bind to VEGF165 and VEGF145, but not VEGF121. Thus, in addition to neuronal guidance, neuropilin-2 plays a role in angiogenesis and cardiovascular functions (4). Although neuropilin-2 has been linked to tumor biology (e.g. pancreatic cancer, bladder cancer, lung cancer, and neuroblastoma), its role in tumor pathogenesis is still under investigation (4,5).

Background References

1. Pasterkamp, R.J. and Kolodkin, A.L. (2003) *Curr Opin Neurobiol* 13, 79-89.
2. Takahashi, T. and Strittmatter, S.M. (2001) *Neuron* 29, 429-39.
3. Zanata, S.M. et al. (2002) *J Neurosci* 22, 471-7.
4. Favier, B. et al. (2006) *Blood* 108, 1243-50.
5. Chen, C. et al. (2005) *World J Surg* 29, 271-5.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)
IF-F: Immunofluorescence (Frozen)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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