

# Sema-3A and NRP1/Plexin A1 Receptor Antibody Sampler Kit

Catalog # SK6190

## Kit Components:

Catalog#	Description	Host	Size	Applications	Species Reactivity	MW (kDa)
SP1221	Semaphorin-3A (Central Region)	Rabbit pAb	50 µl	WB, E, IHC	H, R, M	95
SP1241	Semaphorin-3A (C-terminal)	Rabbit pAb	50 µl	WB, E	H, R, M	95
SP1401	Semaphorin-3A (N-terminal)	Rabbit pAb	50 µl	WB, E	H, R, M	95
PP1301	Plexin A1 (Sema Domain)	Rabbit pAb	50 µl	WB,E,IP,ICC,IHC	H, R, M	220
PP1471	Plexin A1 (Sema Domain)	Rabbit pAb	50 µl	WB,E,ICC	H, R, M	220
NP2111	Neuropilin-1 (a1 CUB Domain)	Rabbit pAb	50 µl	WB,E,ICC,IHC	H, R, M	130

Applications: WB = Western blot, E = ELISA, IP = Immunoprecipitation, ICC = Immunocytochemistry, IHC = Immunohistochemistry. Species: H = Human, R = Rat, M = Mouse

## Kit Summary:

The Sema-3A and NRP1/Plexin A1 Receptor antibody sampler kit can be used to examine expression levels of Semaphorin-3A (Sema-3A) and its co-receptors Neuropilin 1 (NRP1) and Plexin A1 in various species and applications.

## Buffers and Storage:

Rabbit polyclonal antibodies are supplied in 50µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

## Background:

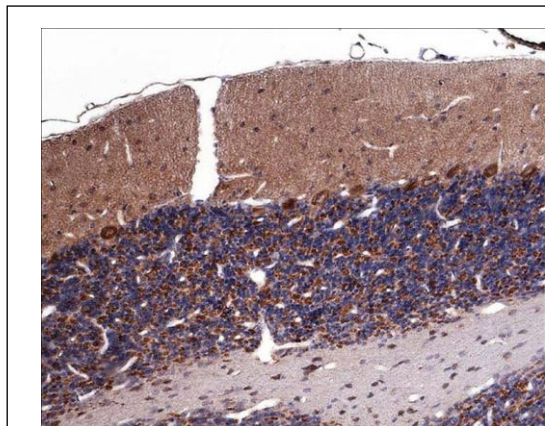
One family of inhibitory axon guidance molecules is the semaphorins. The semaphorins include secreted, transmembrane, and GPI-anchored extracellular molecules that are involved in regulating axon guidance by inhibiting axons from growing toward incorrect targets. Semaphorin 3A (Sema3A) may play a particularly interesting role in limiting axon regeneration since it is expressed in meningeal fibroblasts that invade the injured spinal cord and surround the glial scar. In addition, the Sema3A co-receptors, Neuropilin-1 and Plexin-A1, are expressed on axons that regenerate up to the injured region, but do not cross this Sema3A-containing region. Thus, Sema3A and its co-receptors may have important roles in regulating axon guidance during neuronal development and after neuronal injury.

## References:

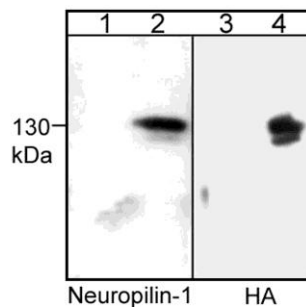
Kolodokin, A.L. et al. (1993) Cell 75:1389.  
Luo, Y. et al. (1993) Cell 75:217.  
Pasterkamp, R.J. & Verhaagen, J. (2001) Brain Res Rev 35:36.

## Product References:

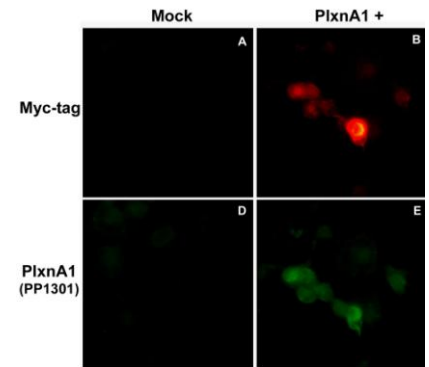
**SP1121**  
Tang, X-Q. et al. (2007) J. Neurosci. 27(22):6068 (WB: Rat E14 spinal cord)  
Pan, H. et al. (2008) Breast Cancer Res Treat. Sep 12. (WB: human MDA-MB-231 cells, shRNA knockdown)  
**NP2111**  
Saban, M.R. et al. (2008) Am J Phys Renal Phys 295(1):F60 (ICC: H. Urothelium)



Formalin fixed, citric acid treated paraffin sections of adult Rat cerebellum. Sections were probed with anti-Sema3A (SP1221) then anti-Rabbit:HRP before detection using DAB. (Images provided by Carl Hobbs and Dr. Pat Doherty at Wolfson Centre for Age-Related Diseases, King's College London).



Western blot image of COS-7 cells untransfected (lanes 1 & 3) or transfected with HA-tagged mouse NRP1 (lanes 2 & 4). Blots were probed with anti-NRP1 (NP2111) (lanes 1 & 2) or with anti-HA (lanes 3 & 4).



Immunocytochemical double labeling using anti-Myc mouse monoclonal and anti-Plexin-A1 rabbit polyclonal (PP1301) antibodies in Cos-7 cells mock transfected (A,D) or transfected with Myc-tagged mouse Plexin-A1 construct (B,E).

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