10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Plexin A1 (Sema Domain) Antibody

Catalog # AN1911

Product Information

Application	WB, IHC, ICC, IP
Primary Accession	Q9UIW2
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	211067

Additional Information

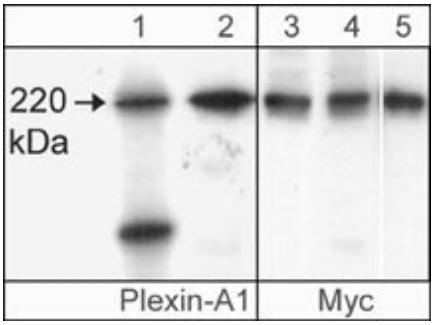
Gene ID	5361
Other Names	PLXN1, NOV, Sema3A
Dilution	WB~~1:1000 IHC~~1:100~500 ICC~~N/A IP~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Plexin A1 (Sema Domain) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

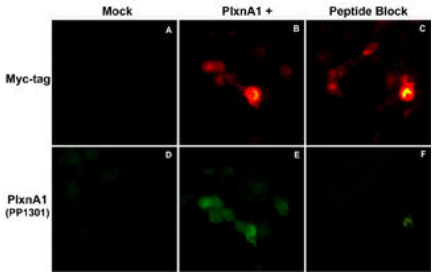
Plexins are a family of large integral membrane proteins that complex with neuropilins to form semaphorin co-receptors. The extracellular region of plexins contains a semaphorin domain, multiple glycine-rich motifs, and MET-related sequences. The cytoplasmic region contains a Sex/Plexin domain and putative tyrosine phosphorylation sites that mediate signal transduction after activation. This region in Plexin-A1 binds the RhoGTPases, Rnd1 and RhoD. Recruitment of Rnd1 has been implicated in the cytoskeletal collapse that occurs after semaphorin-mediated activation of Plexin-A1, while RhoD may block this collapsing activity through interaction with the cytoplasmic region of Plexin-A1. The expression of Plexin-A1, along with the co-receptor Neuropilin-1, 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.

Images

Western blots showing Cos-7 cells transfected with mouse Myc-tagged Plexin-A1 (lanes 1 & 3), neonatal rat brain (lane 2), or Plexin-A1 immunoprecipitated from Myc-tagged Plexin-A1 transfected cells using anti-Myc



(lane 4) or anti-Plexin-A1 (AN1911; lane 5). These blots were probed with either the affinity purified anti-Plexin-A1 (AN1911; lanes 1 & 2) or with mouse monoclonal anti-Myc (lanes 3-5).



Immunocytochemical double labeling using anti-Myc mouse monoclonal and anti-Plexin-A1 rabbit polyclonal (AN1911) antibodies in Cos-7 cells mock transfected (A,D) or transfected with Myc-tagged mouse Plexin-A1 construct (B,E). The specificity of the binding in E was demonstrated by using Plexin-A1 peptide (PX1305) in the presence of this anti-Plexin-A1 antibody (C,F).