

Plexin A1 (Sema Domain)

Cat. # PP1301

Host Rabbit Polyclonal

Size 100 µl

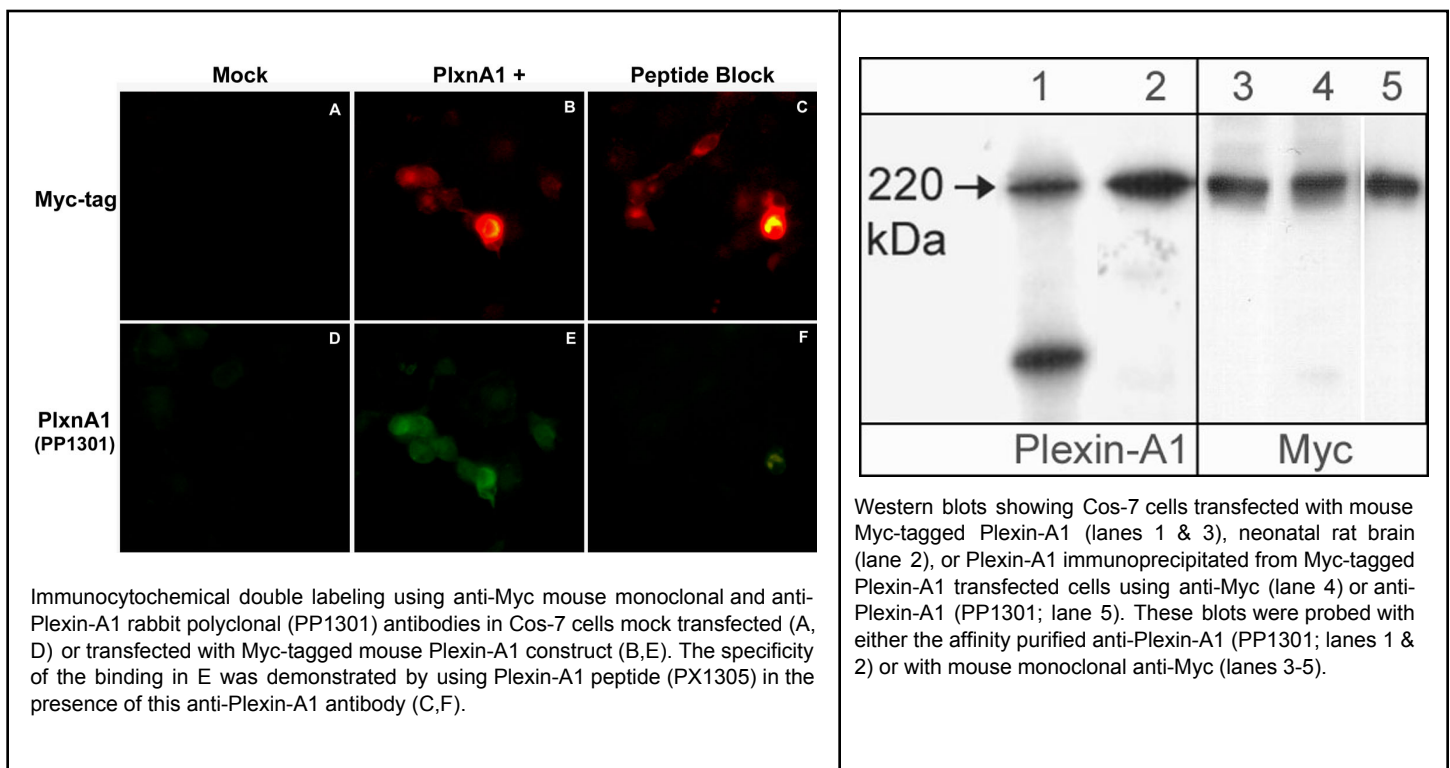
Background:

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.

References

Takahashi, T. & Strittmatter, S.M. (2001) Neuron 29:429.

Tamagnone, L. et al. (1999) Cell 99:71.



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Immunogen:

Plexin-A1 synthetic peptide (coupled to carrier protein) corresponding to a region within the N-terminal half of the semaphorin domain in human Plexin-A1. This sequence is highly conserved in rat and mouse Plexin-A1, and has low homology to other Plexin family members.

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl 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.

Applications:

WB	1:1,000	IP	1:50
ELISA	1:2,000	IHC	1:100
ICC	1:100		

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Specificity:

The antibody detects a 220 kDa* protein corresponding to the apparent molecular mass of Plexin-A1 on SDS-PAGE immunoblots of neonatal rat brain and Cos-7 cells transfected with mouse Plexin-A1. In immunocytochemistry, this antibody co-localizes with anti-Myc in Cos-7 cells transfected with Myc-tagged mouse Plexin-A1.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Related Products:

SP1221 Semaphorin-3A (Central Region) Rabbit Polyclonal

SP1241 Semaphorin-3A (C-terminal) Rabbit Polyclonal

SP1401 Semaphorin-3A (N-terminal) Rabbit Polyclonal

NP2111 Neuropilin-1 (a1 CUB Domain) Rabbit Polyclonal

PX1305 Plexin A1 (Sema Domain) Peptide

PP1841 Plexin B1 (C-terminal Region) Rabbit Polyclonal

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