

Plexin A1 (Sema Domain) Peptide

Cat. # PX1305

Size 50 µg

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.

Peptide Sequence:

Plexin-A1 synthetic peptide corresponds to a region within the N-terminal half of the semaphorin domain of 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:

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-Plexin-A1 (Sema domain) antibody (PP1301) in ELISA, and has been shown to block the reactivity of PP1301 in Western blot and immunocytochemistry applications.

Related Products:

NP2111 Neuropilin-1 (a1 CUB Domain) Rabbit Polyclonal
PP1301 Plexin A1 (Sema Domain) Rabbit Polyclonal
PP1471 Plexin A1 (Sema Domain) Rabbit Polyclonal
PP1841 Plexin B1 (C-terminal Region) Rabbit Polyclonal

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