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Plexin A1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58050

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9UIW2
Reactivity	Rat, Pig, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	211067
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Plexin A1
Epitope Specificity	901-1000/1896
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane (Probable); Single-pass type I membrane protein.
SIMILARITY	Belongs to the plexin family.Contains 4 IPT/TIG domains.Contains 1 Sema domain.
SUBUNIT	Interacts directly with NRP1 and NRP2. Interacts with FARP2, RND1 and KDR/VEGFR2. Binding of SEMA3A leads to dissociation of FARP2.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Plexins are a family of large integral membrane proteins that complex with neuropilins to form semaphorin co-receptors. The extracellular region of plexins contain 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.

Additional Information

Gene ID	5361
Other Names	Plexin-A1, Semaphorin receptor NOV, PLXNA1, NOV, PLXN1

Target/Specificity	Detected in fetal brain, lung, liver and kidney.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	PLXNA1 (HGNC:9099)
Synonyms	NOV, PLXN1
Function	Coreceptor for SEMA3A, SEMA3C, SEMA3F and SEMA6D. Necessary for signaling by class 3 semaphorins and subsequent remodeling of the cytoskeleton. Plays a role in axon guidance, invasive growth and cell migration. Class 3 semaphorins bind to a complex composed of a neuropilin and a plexin. The plexin modulates the affinity of the complex for specific semaphorins, and its cytoplasmic domain is required for the activation of down-stream signaling events in the cytoplasm. Acts as coreceptor of TREM2 for SEMA6D in dendritic cells and is involved in the generation of immune responses and skeletal homeostasis.
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:P70206}; Single-pass type I membrane protein
Tissue Location	Detected in fetal brain, lung, liver and kidney.