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Anti-Semaphorin 4A Antibody

Catalog # AP51499

Product Information

Application	WB, IHC, IP, IF/IC
Primary Accession	Q9H3S1
Reactivity	Human, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	83574

Additional Information

Gene ID	64218
Other Names	SEMAB; SEMB; Semaphorin-4A; Semaphorin-B; Sema B
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Semaphorin 4A. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IP~~IP (1/10 - 1/100) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

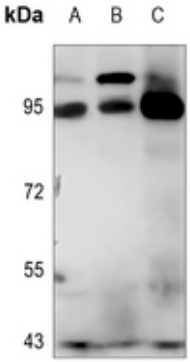
Protein Information

Name	SEMA4A
Synonyms	SEMAB, SEMB
Function	Cell surface receptor for PLXNB1, PLXNB2, PLXNB3 and PLXND1 that plays an important role in cell-cell signaling (By similarity). Regulates glutamatergic and GABAergic synapse development (By similarity). Promotes the development of inhibitory synapses in a PLXNB1-dependent manner and promotes the development of excitatory synapses in a PLXNB2-dependent manner (By similarity). Plays a role in priming antigen-specific T-cells, promotes differentiation of Th1 T- helper cells, and thereby contributes to adaptive immunity (By similarity). Promotes phosphorylation of TIMD2 (By similarity). Inhibits angiogenesis (By similarity). Promotes axon growth cone collapse (By similarity). Inhibits axonal extension by providing local signals to specify territories inaccessible for growing axons (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein

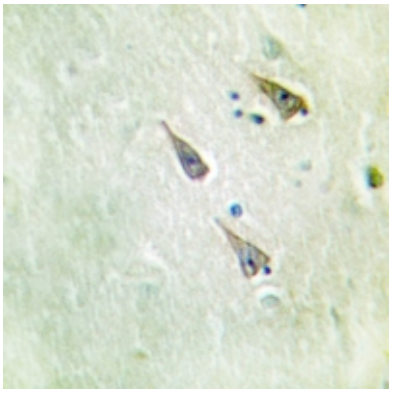
References

Seki N.,et al.Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
Clark H.F.,et al.Genome Res. 13:2265-2270(2003).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Gregory S.G.,et al.Nature 441:315-321(2006).
Abid A.,et al.J. Med. Genet. 43:378-381(2006).

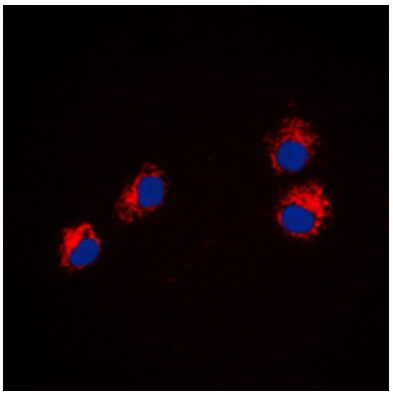
Images



Western blot analysis of Semaphorin 4A expression in HEK293T (A), A549 (B), SGC7901 (C) whole cell lysates. (Predicted band size: 83 kD; Observed band size: 95 kD)

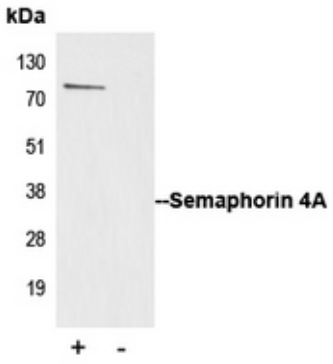


Immunohistochemical analysis of Semaphorin 4A staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Semaphorin 4A staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Immunoprecipitation of Semaphorin 4A from 0.5mg Jurkat whole cell extract lysate, using 5ug of Anti-Semaphorin 4A Antibody and 50ul of protein G magnetic beads (+). No antibody was added to the control (-). The antibody was incubated under agitation with Protein G beads for 10min, Jurkat whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation. Proteins



were eluted by addition of 40ul SDS loading buffer and incubated for 10min at 70°C; 10ul of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with Anti-Semaphorin 4A Antibody.

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