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## Phospho-Semaphorin 4B (Ser825) Antibody

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> H M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 105	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #J3KNP4	<b>Entrez-Gene Id:</b> 10509
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### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

Phospho-Semaphorin 4B (Ser825) Antibody detects endogenous levels of semaphorin 4B protein only when phosphorylated at Ser825.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser825 of human semaphorin 4B protein. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

The semaphorin family of proteins is involved in axon guidance, cell migration, angiogenesis, and immune response. Plexins and neuropilins bind with high affinity to semaphorins to mediate their functions. Semaphorins are divided into seven classes of secreted or membrane-bound proteins. Members of Class 4 semaphorins include 4A through 4G; semaphorin 4B is a membrane-associated protein (1,2). Semaphorin 4B binds to the CLCP1 receptor and regulates cell motility (3). Furthermore, semaphorin 4B, like many other semaphorins, has a PDZ domain-binding motif at the carboxy terminus that interacts with PSD95 and localizes to the post-synaptic membrane (4). The phosphorylation site at Ser825 was identified at Cell Signaling Technology using PTMScan® Technology, a proprietary proteomic method for post-translational modification site discovery (5).

### Background References

1. Pasterkamp, R.J. and Kolodkin, A.L. (2003) *Curr Opin Neurobiol* 13, 79-89.
2. Kruger, R.P. et al. (2005) *Nat Rev Mol Cell Biol* 6, 789-800.
3. Nagai, H. et al. (2007) *Oncogene* 26, 4025-31.
4. Burkhardt, C. et al. (2005) *FEBS Lett* 579, 3821-8.
5. Moritz, A. et al. (2010) *Sci Signal* 3, ra64.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat

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