

#13299 Store at -20C

Semaphorin 3B (D5A2P) Rabbit mAb



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H	Endogenous	80	Rabbit IgG	#Q13214	7869

Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Semaphorin 3B (D5A2P) Rabbit mAb recognizes endogenous level of total semaphorin 3B protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln717 of human semaphorin 3B protein.

Background

Semaphorins are a family of cell surface and secreted proteins initially recognized as axon guidance factors that control the development of the central nervous system (1). They are involved in cell migration, angiogenesis, and immune responses (2-6). Based on protein structure, there are eight classes of semaphorins. Class 3-7 semaphorins are expressed in vertebrates. Semaphorin 3 subfamily members are the only secreted semaphorins in vertebrates. There are seven semaphorin 3 proteins and their receptors include neuropilins and the type A/D family plexins (7-9).

Semaphorin 3B functions as a tumor suppressor, as research studies have shown that it is deleted or inactivated in lung and breast cancer (10,11). Overexpression of semaphorin 3B inhibits tumor cell proliferation and causes apoptosis (12,13). Semaphorin 3B also inhibits angiogenesis (14). Semaphorin 3B loses its activity upon cleavage by furin-like pro-protein convertases (14).

Background References

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5. Nakagawa, Y. et al. (2011) *J Immunol* 186, 2881-8.
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7. He, Z. and Tessier-Lavigne, M. (1997) *Cell* 90, 739-51.
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11. Nasarre, P. et al. (2005) *Med Sci (Paris)* 21, 641-7.
12. Tse, C. et al. (2002) *Cancer Res* 62, 542-6.
13. Castro-Rivera, E. et al. (2004) *Proc Natl Acad Sci U S A* 101, 11432-7.
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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

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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