Revision 1

#4191 Store at -20C

Phospho-Stathmin (Ser38) (D19H10) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IHC-P, IF-IC	H Mk	Endogenous	19, 20	Rabbit IgG	#P16949	3925

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200
Immunohistochemistry (Paraffin)	1:8000
Immunofluorescence (Immunocytochemistry)	1:12800

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

Phospho-Stathmin (Ser38) (D19H10) Rabbit mAb detects endogenous levels of stathmin protein only when phosphorylated at Ser38.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser38 of human stathmin protein.

Background

Stathmin is a ubiquitously expressed microtubule destabilizing phosphoprotein that is upregulated in a number of cancers. The amino terminus of the protein contains multiple phosphorylation sites and is involved in the promotion of tubulin filament depolymerization. Phosphorylation at these sites inactivates the protein and stabilizes microtubules. Ser16 phosphorylation by CaM kinases II and IV (1,2) increases during G2/M-phase and is involved in mitotic spindle regulation (3,4). Ser38 is a target for cdc2 kinase (5) and TNF-induced cell death gives rise to reactive oxygen intermediates leading to hyperphosphorylation of stathmin (6). EGF receptor activation of Rac and cdc42 also increases phosphorylation of stathmin on Ser16 and Ser38 (7). Other closely related family members are neuronally expressed and include SCG10, SCLIP, RB3 and its splice variants RB3' and RB3''. Stathmin and SCG10 have been shown to play roles in neuronal-like development in PC-12 cells (8).

Background References

1. Marklund, U. et al. (1994) *Eur J Biochem* 225, 53-60.
2. le Gouvello, S. et al. (1998) *J Immunol* 161, 1113-22.
3. Mistry, S.J. and Atweh, G.F. (2001) *J Biol Chem* 276, 31209-15.
4. Gavet, O. et al. (1998) *J Cell Sci* 111 (Pt 22), 3333-46.
5. Luo, X.N. et al. (1994) *J Biol Chem* 269, 10312-8.
6. Vancompernolle, K. et al. (2000) *J Biol Chem* 275, 33876-82.
7. Daub, H. et al. (2001) *J Biol Chem* 276, 1677-80.
8. Di Paolo, G. et al. (1996) *J Cell Biol* 133, 1383-90.

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 **IHC-P:** Immunohistochemistry (Paraffin)
IF-IC: Immunofluorescence (Immunocytochemistry)

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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