

Stathmin Antibody



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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IHC-P Endogenous	H, M, R, Mk	19 kDa	Rabbit**

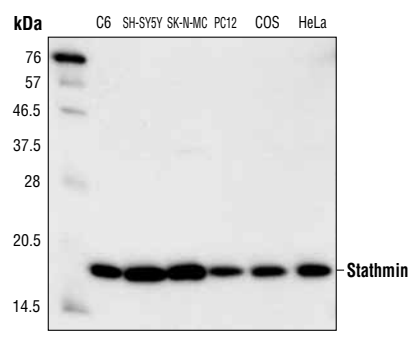
Background: Stathmin, a ubiquitously expressed microtubule destabilizing phosphoprotein, is upregulated in a number of cancers. The amino-terminus of the protein is involved in promotion of tubulin filament depolymerization and contains multiple phosphorylation sites. Phosphorylation at these sites inactivates the protein and stabilizes microtubules. Ser16 phosphorylation by CaM kinase 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 PC12 cells (8).

Specificity/Sensitivity: Stathmin Antibody detects endogenous levels of total stathmin protein. The antibody does not cross-react with related proteins such as SCG10, SCLIP and RB3.

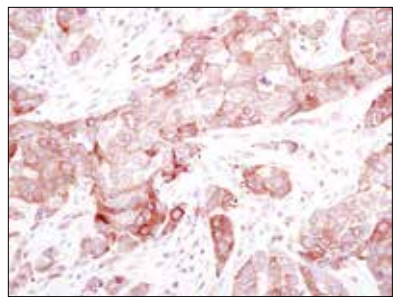
Source/Purification: Polyclonal antibodies are produced by immunizing rabbits with a synthetic peptide (KLH-coupled) corresponding to residues surrounding Ser38 of human stathmin. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Marklund, U. et al. (1994) *Eur. J. Biochem.* 225, 53–60.
- (2) le Gouvello, S. et al. (1998) *J. Immunol.* 161, 1113–1133.
- (3) Mistry, S.J. and Atweh, G.F. (2001) *J. Biol. Chem.* 276, 31209–31215.
- (4) Gavet, O. et al. (1998) *J. Cell Sci.* 111, 3333–3346.
- (5) Luo, X. N. et al. (1994) *J. Biol. Chem.* 269, 10312–10318.
- (6) Vancompernelle, K. et al. (2000) *J. Biol. Chem.* 275, 33876–33882.
- (7) Daub, H. et al. (2001) *J. Biol. Chem.* 276, 1677–1680.
- (8) Di Paolo, G. et al. (1996) *J. Cell. Biol.* 133, 1383–1390.



Western blot analysis of extracts from C6, SH-SY5Y, SK-N-MC, PC12, COS and HeLa cells using Stathmin Antibody.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Stathmin Antibody.

Entrez-Gene ID #3925
Swiss-Prot Acc. #P16949

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.

***Species cross-reactivity is determined by western blot.**
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:50†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected

Species enclosed in parentheses are predicted to react based on 100% homology.