

# Phospho-HSP27 (Ser82) Antibody II

- Small 100 µl (10 western blots)
- Petite 40 µl (4 western blots)

**Orders** ■ 877-616-CELL (2355)  
orders@cellsignaling.com

**Support** ■ 877-678-TECH (8324)  
info@cellsignaling.com

**Web** ■ www.cellsignaling.com

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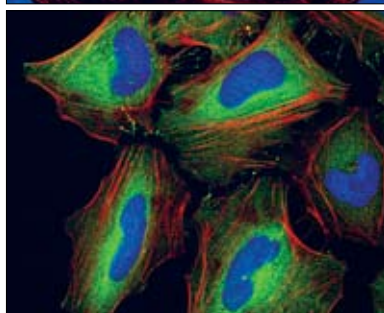
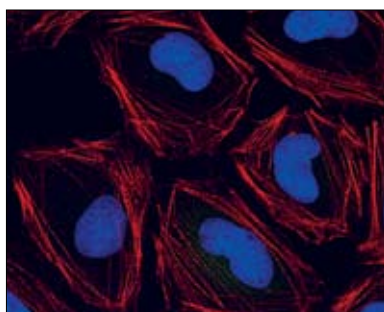
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IHC-P, IHC-F, IF-IC, F Endogenous	H, M, R, Mk	27 kDa	Rabbit**

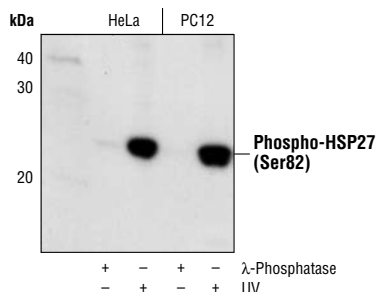
**Background:** Heat shock protein (HSP) 27 is one of the small HSPs that are constitutively expressed at different levels in various cell types and tissues. Like other small heat shock proteins, HSP27 is regulated at both the transcriptional and posttranslational levels (1). In response to stress, the expression level of HSP27 increases several-fold to confer cellular resistance to the adverse environmental change. HSP27 is phosphorylated at Ser15, Ser78 and Ser82 by MAPKAP kinase 2 as a result of the activation of the p38 MAP kinase pathway (2,3). Phosphorylation of HSP27 causes a change in its tertiary structure, which shifts from large homotypic multimers to dimers and monomers (4). It has been shown that phosphorylation and increased concentration of HSP27 modulates actin polymerization and reorganization (5,6).

**Specificity/Sensitivity:** Phospho-HSP27 (Ser82) Antibody II detects endogenous HSP27 only when phosphorylated at Ser82. The antibody does not recognize other heat shock proteins.

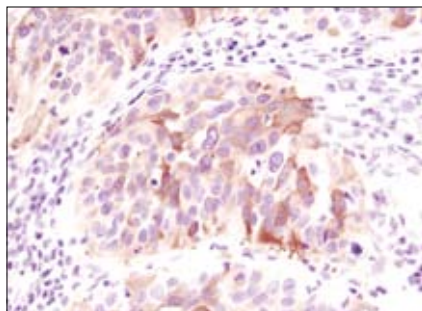
**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser82 of human HSP27. Antibodies are purified by protein A and peptide affinity chromatography.



Confocal immunofluorescent analysis of HeLa cells, untreated (upper) or anisomycin-treated (lower), using Phospho-HSP27 (Ser82) Antibody II (green). Actin filaments have been labeled with Alexa Fluor® 555 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



Western blot analysis of extracts from HeLa and PC12 cells, treated with λ-phosphatase or UV as indicated, using Phospho-HSP27 (Ser82) Antibody II.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma using Phospho-HSP27 (Ser82) Antibody II.

Entrez-Gene ID #3315  
Swiss-Prot Acc. #P04792

**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)	1:100
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Immunohistochemistry (Frozen)	1:100
Fixative:	10% neutral buffered formalin
Immunofluorescence (IF-IC)	1:400
Flow cytometry	1:50

For application specific protocols please see the web page for this product at [www.cellsignaling.com](http://www.cellsignaling.com).

Please visit [www.cellsignaling.com](http://www.cellsignaling.com) for a complete listing of recommended companion products.

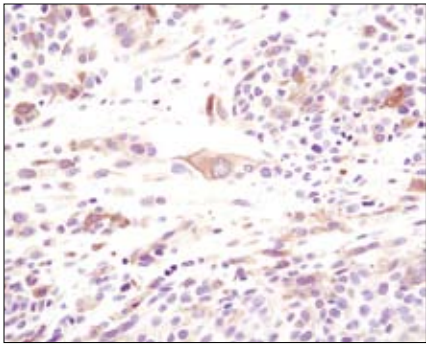
**Background References:**

- (1) Arrigo, A.P. and Landry, J. (1994) *Cold Spring Harbor Laboratory Press, NY*, 335-373.
- (2) Landry, J. et al. (1992) *J. Biol. Chem.* 267, 794-803.
- (3) Rouse, J. et al. (1994) *Cell* 78, 1027-1037.
- (4) Rogalla, T. et al. (1999) *J. Biol. Chem.* 274, 18947-18956.
- (5) Lavoie, J. et al. (1993) *J. Biol. Chem.* 268, 24210-24214.
- (6) Rousseau, S. et al. (1997) *Oncogene* 15, 2169-2177.

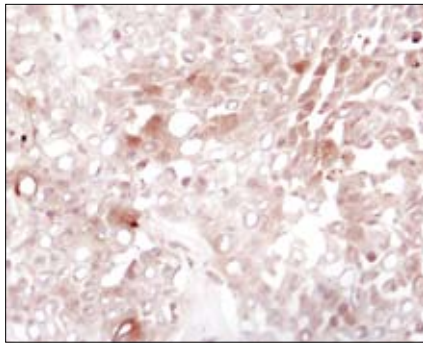
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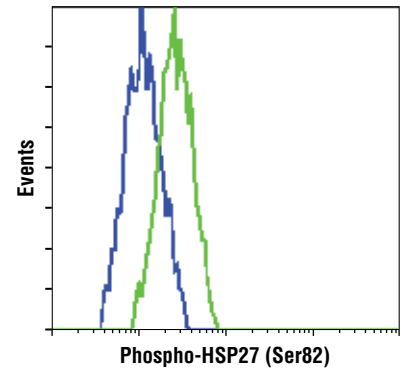
**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**



*Immunohistochemical analysis of paraffin-embedded human melanoma using Phospho-HSP27 (Ser82) Antibody II.*



*Immunohistochemical analysis of frozen H1650 xenograft using Phospho-HSP27 (Ser82) Antibody II.*



*Flow cytometric analysis of HeLa cells, untreated (blue) or UV-treated (green), using Phospho-HSP27 (Ser82) Antibody II.*