

Phospho-HSP27 (Ser15) Antibody

✓ 100 µl
(10 western blots)

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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.

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

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, Mk	27 kDa	Rabbit**

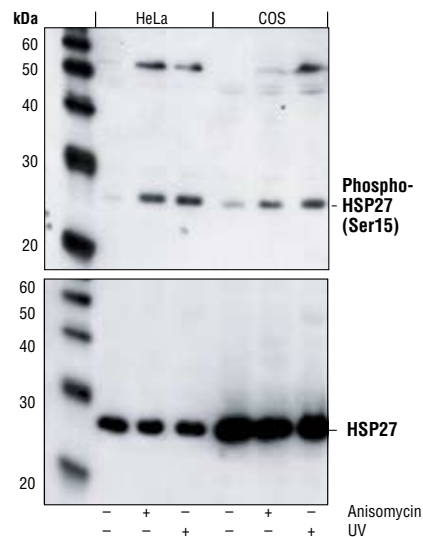
Background: Heat shock protein (HSP) 27 is one of the small HSPs that are constitutively expressed at different levels in various cell types and tissues. Like other small heat shock proteins, HSP27 is regulated at both the transcriptional and posttranslational levels (1). In response to stress, the expression level of HSP27 increases several-fold to confer cellular resistance to the adverse environmental change. HSP27 is phosphorylated at serines 15, 78 and 82 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 (Ser15) Antibody detects endogenous levels of HSP27 only when phosphorylated at serine 15.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphorylated peptide (KLH-coupled) corresponding to residues surrounding Ser15 of human HSP27. Antibodies are purified by protein A and peptide affinity chromatography.

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.



Western blot analysis of extracts from HeLa and COS cells, untreated, anisomycin-treated or UV-treated, using Phospho-HSP27 (Ser15) Antibody (upper) or HSP27 (G31) mAb #2402 (lower).

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

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.