Revision 3

Store at -20C

#2406

# Phospho-HSP27 (Ser82) Antibody II

Cell Signaling TECHNOLOGY®

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

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| WB, IHC-P, IF-IC, FC-FP | H M R Mk | Endogenous | 27 | Rabbit | #P04792 | 3315 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |
| Immunohistochemistry (Paraffin) | 1:100 |
| Immunofluorescence (Immunocytochemistry) | 1:400 |
| Flow Cytometry (Fixed/Permeabilized) | 1:50 |

## 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.

## 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.

## 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 HSPs, HSP27 is regulated at both the transcriptional and posttranslational levels (1). In response to stress, the HSP27 expression increases several-fold to confer cellular resistance to the adverse environmental change. HSP27 is phosphorylated at Ser15, Ser78, and Ser82 by MAPKAPK-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).

## Background References

1. Stetler, R.A. et al. (2009) *Curr Mol Med* 9, 863-72.
2. Landry, J. et al. (1992) *J Biol Chem* 267, 794-803.
3. Rouse, J. et al. (1994) *Cell* 78, 1027-37.
4. Rogalla, T. et al. (1999) *J Biol Chem* 274, 18947-56.
5. Lavoie, J.N. et al. (1993) *J Biol Chem* 268, 24210-4.
6. Rousseau, S. et al. (1997) *Oncogene* 15, 2169-77.

## 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 **IHC-P:** Immunohistochemistry (Paraffin)
**IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

## 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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