Revision 3

Store at -20C

#2442

HSP27 Antibody

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, FC-FP	M R	Endogenous	27	Rabbit	#P14602	15507

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Flow Cytometry (Fixed/Permeabilized)	1:25

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

HSP27 Antibody detects endogenous levels of total HSP27 protein. The antibody does not cross-react with other heat shock proteins.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to rat 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

W: Western Blotting **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

M: Mouse **R:** Rat

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Limited Uses

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