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Phospho-HSP27 (Ser82) (D1H2F6) XP[®] Rabbit mAb (Alexa Fluor[®] 647 Conjugate)

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

Applications: FC-FP	Reactivity: H M	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P04792	Entrez-Gene Id: 3315
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Product Usage Information

Application

Flow Cytometry (Fixed/Permeabilized)

Dilution

1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

Phospho-HSP27 (Ser82) (D1H2F6) XP[®] Rabbit mAb (Alexa Fluor[®] 647 Conjugate) recognizes endogenous levels of HSP27 protein only when phosphorylated at Ser82.

Species predicted to react based on 100% sequence homology

Rat, Hamster, Bovine, Dog, Horse

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser82 of human HSP27 protein.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor[®] 647 fluorescent dye and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-HSP27 (Ser82) (D1H2F6) XP[®] Rabbit mAb #9709.

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).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **M:** Mouse

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