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#2402

HSP27 (G31) Mouse mAb

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

Applications: W, IHC-P, IF-IC	Reactivity: H Mk	Sensitivity: Endogenous	MW (kDa): 27	Source/Isotype: Mouse IgG1	UniProt ID: #P04792	Entrez-Gene Id: 3315
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Product Usage Information

Application

Western Blotting
Immunohistochemistry (Paraffin)
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:100 - 1:400
1:400 - 1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #47289.

Specificity/Sensitivity

HSP27 (G31) Mouse mAb detects endogenous levels of total HSP27 protein. The antibody does not cross-react with other heat shock proteins.

Non-specific staining was observed in red blood cells of few tissues by immunohistochemistry.

Source / Purification

Monoclonal antibody is produced by immunizing animals with full length HSP27 protein.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **Mk:** Monkey

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