

Stressgen
 BIOREAGENTS

Human Hsp27 (Phospho) Recombinant Protein

Product Specifications							
Catalog Number:	SPP-716						
Protein Species:	Human						
Application Notes:	If SPP-716 is to be used for Western blot analysis, we recommend that the material be diluted into an appropriate amount of SDS containing sample buffer (e.g. Laemmli, U.K., (1970) Nature 277 : 680-685) and heated at 100°C for 5 minutes prior to use. On a 15-well minigel system, 50ng of protein per lane should be sufficient when used in a colorimetric Western blot with Assay Designs' Stressgen-brand antibodies SPA-523, SPA-524 and SPA-525.						
Purity:	This protein is >90% pure as determined by SDS-PAGE analysis						
Format:	Purified human Hsp27 protein in Tris buffer pH 7.5, containing MAPKAP kinase 2, ATP, MgCl ₂ , DTT, EGTA, EDTA, NaCl, Na ₃ VO ₄ and Glycerophosphate						
Storage:	At or below -70°C. Avoid repeated/thaw cycles.						
Related Products:	<table border="0"> <tr> <td>SPA-523</td> <td>Hsp27 (phospho-Ser78) Polyclonal Antibody</td> </tr> <tr> <td>SPA-524</td> <td>Hsp27 (phospho-Ser82) Polyclonal Antibody</td> </tr> <tr> <td>SPA-525</td> <td>Hsp27 (phospho-Ser15) Polyclonal Antibody</td> </tr> </table>	SPA-523	Hsp27 (phospho-Ser78) Polyclonal Antibody	SPA-524	Hsp27 (phospho-Ser82) Polyclonal Antibody	SPA-525	Hsp27 (phospho-Ser15) Polyclonal Antibody
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SPA-524	Hsp27 (phospho-Ser82) Polyclonal Antibody						
SPA-525	Hsp27 (phospho-Ser15) Polyclonal Antibody						

Background:

Hsp27 is one of the most common members of the highly conserved and ubiquitously expressed family of small heat shock proteins (sHSP), which also includes α B-crystallin¹. It is characterized by a conserved C-terminal α -crystallin domain consisting of two anti-parallel β -sheets that promote oligomer formation required for its primary chaperone function as inhibitors of irreversible protein aggregation². Hsp27 oligomerization is modulated by post-translational phosphorylation of Hsp27 at three serine residues, Ser-15, Ser-78, and Ser-82, by a variety of protein kinases including MAPKAPK-3, PKA α , p70S6K, PKD I, and PKC δ ^{3,4}. Hsp27 has been shown to inhibit actin polymerization by binding of unphosphorylated Hsp27 monomers to actin intermediate filaments⁵. Anti-apoptotic functions of Hsp27 have also been identified through interactions with DAXX7, activation of AKT, and inhibition of apoptosome formation^{6,7,8}. Evidence suggests altered expression of Hsp27 is implicated in the pathogenesis of breast, ovarian, and prostate cancer⁹.

References:

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- Beck, F.X., *et al.* (2000) Am J Physiol Renal Physiol. **279**, F203-F215.
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