Hsp27 Monoclonal Antibody (G3.1), R-Phycoerythrin Conjugate

Product Specifications

Catalog Number:	SPA-800PE
Host:	Mouse
Isotype:	IgG_1
Species Reactivity:	Human and monkey
Applications: *The optimal dilution for a specific application must be determined by the investigator*	Flow Cytometry: 10 µg/mL
Predicted M.W.:	~27 kDa
Concentration:	See product label
Purification:	Protein G Affinity
Format:	PBS, pH 7.2, 0.09% azide
Storage: *Shipping conditions may differ from the recommended storage temperature*	Store at 4°C
Immunogen:	Native human Hsp27 protein

Related Products:

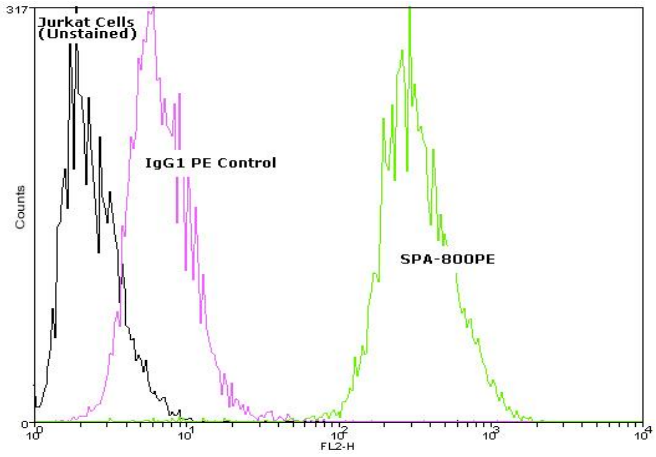
NEW!	SPA-800-488	Hsp27 Monoclonal Antibody (G3.1), DyLight™ 488 Conjugate
	SPP-715	Hsp27 Recombinant Protein
	EKS-500	Hsp27 ELISA Kit
	SPA-800	Hsp27 Monoclonal Antibody (G3.1)

Background:

Human Hsp27, mouse Hsp25 and αβ crystallin belong to a diverse family of small heat shock proteins produced in all organisms. Chaperone-like proteins which bind unfolded polypeptides and prevent uncontrolled protein aggregation, Hsp27 proteins appear to function mainly as oligomers of as many as 8-40 Hsp27 protein monomers in cells, and data suggests that the large oligomers of Hsp27 act as chaperones by providing a site where unfolding proteins may bind until ATP and Hsp70-dependent refolding can occur[1]. The state of phosphorylation and oligomerization of Hsp27 may regulate microfilament organization in light of data showing only the nonphosphorylated lower molecular weight forms of Hsp27 binding actin barbed ends and inhibiting polymerization[2]. Hsp27 also appears to protect cells by enhancing cellular glutathione levels; cells overexpressing Hsp27 incur elevated glutathione levels. Data from studies using wild-type Hsp27 and mutant forms in which the serine phosphorylation sites were mutated to alanines, glycines or aspartates reveal that cellular glutathione levels depend on the oligomerization of Hsp27[3]. Recent data suggests a novel function for Hsp27 as a negative regulator of cytochrome c-dependent activation of procaspase-3[4].

References:

1. Ehrnsperger, M., *et al*. (1997) EMBO J. **16**, 221-229.
2. Benndorf, R.,*et al*. (1994) J Biol Chem. **269**, 20780-20784.
3. Mehlen, P., *et al*. (1997) Biochem Biophys Res Commun. **241**, 187-192.
4. Pandey, P., *et al*. (2000) Oncogene **19**, 1975-1981.



Flow cytometry analysis of 10^6 Jurkat cells using Hsp27 Monoclonal Antibody (G3.1), R-Phycoerythrin Conjugate at a concentration of 10 µg/mL