

## Hsp70 (Hsp72) Monoclonal Antibody (C92F3A-5), Fluorescein Conjugate

New Conjugate Forms  
Now Available!  
DyLight™ 488 & PE

### Product Specifications

<b>Catalog Number:</b>	SPA-810FI
<b>Source:</b>	Mouse
<b>Isotype:</b>	IgG <sub>1</sub>
<b>Species Reactivity:</b>	Human, mouse, rat, beluga, bovine, canine, chicken <sup>6</sup> , <i>Drosophila</i> , fish (carp), guinea pig, hamster, monkey, pig, rabbit, sheep, and teal <sup>6</sup> Other species not tested.
<b>Applications:</b>	<b>Flow:</b> 1:10  Other applications not tested. <i>The optimal dilution for a specific application must be determined by the investigator</i>
<b>Predicted M.W.:</b>	~ 70 kDa
<b>Concentration:</b>	See product label
<b>Purification:</b>	Protein G Affinity
<b>Format:</b>	PBS, pH 7.2, 0.09% azide
<b>Storage:</b>	4 °C <i>Shipping conditions may differ from the recommended storage temperature</i>
<b>Immunogen:</b>	Native Human Hsp70 Protein <sup>1</sup>
<b>Related Products:</b>	
	ESP-555 Hsp70 Recombinant Human Protein
<b>NEW!</b>	SPA-810PE Hsp70 Monoclonal Antibody (C92F3A-5), PE Conjugate
<b>NEW!</b>	SPA-810-488 Hsp70 Monoclonal Antibody (C92F3A-5), DyLight™ 488 Conjugate
	SPA-810 Hsp70 Monoclonal Antibody (C92F3A-5)
	EKS-715 Hsp70 High Sensitivity ELISA Kit

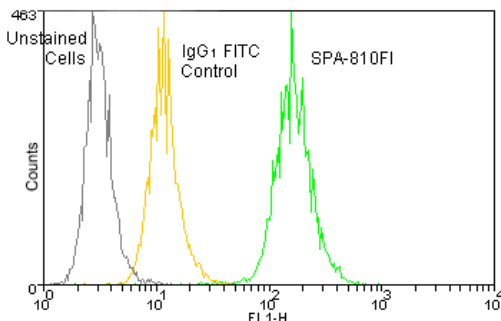
### Background:

The 70 kDa heat shock protein Hsp70 belongs to the Hsp70 family of highly-related protein isoforms ranging in size from 66 kDa to 78 kDa. Hsc70 shares close biochemical and biological ties to Hsp70, and also belongs to the Hsp70 family. These proteins include cognate members found within major intracellular compartments and highly inducible isoforms predominantly cytoplasmic or nuclear in distribution<sup>2</sup>. Members of the Hsp70 family function as molecular chaperones involved in such cellular functions as protein folding, transport, maturation and degradation, operating in an ATP-dependent manner. The molecular chaperones of the Hsp70 family recognize and bind to nascent polypeptide chains or partially folded intermediates of proteins, preventing their aggregation and misfolding, and the binding of ATP triggers a critical conformational change leading to the release of the bound substrate protein<sup>3</sup>. Data demonstrates that with a ubiquitin-like domain at its amino terminus and its association with the 26S proteasome in HeLa cells, Bag-1 modulates the chaperone activity of Hsc70 and Hsp70. These findings reveal Bag-1's role as a physical link between the Hsc70/Hsp70 chaperone system and the proteasome<sup>4</sup>. Experimental data also shows that the ATPase domain and the substrate binding domain of Hsp70 cooperate to form a co-chaperone-chaperone complex with the synaptic vesicle cysteine string protein (csp), essential for normal neurotransmitter release<sup>5</sup>.

### References:

1. Welch, W.J. and Suhan, J.P. (1986) *J Cell Biol.* **103**, 2035-2050.
2. Tavaria, M., et al. (1996) *Cell Stress Chaperones* **1**, 23-28.
3. Fink A.L. (1999) *Physiol Rev.* **79**, 425-449.
4. Luders, J., et al. (2000) *J Biol Chem* **275**, 4613-4617.
5. Stahl B., et al. (1999) *Eur J Cell Biol.* **78**, 375-381.
6. Kilgore, J., et al. (1994) *J App Physiol.* **76**, 598-601.

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**Flow Cytometry Analysis:** 10<sup>6</sup> Jurkat cells stained using Hsp70 Monoclonal Antibody (C92F3A-5), Fluorescein Conjugate at a concentration of 100 µg/mL.

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