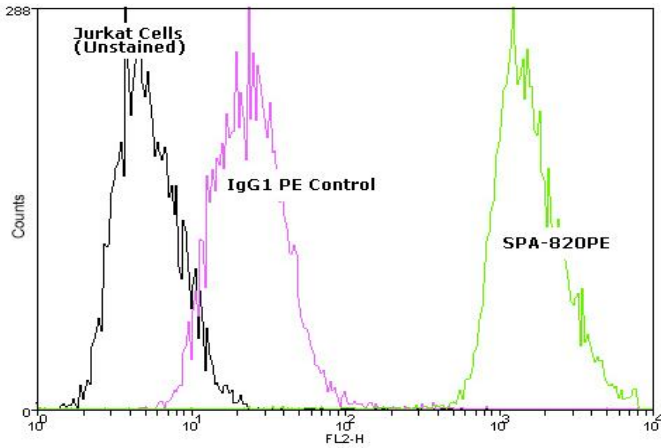
Hsp70/Hsc70 Monoclonal Antibody (N27F34), R-Phycoerythrin Conjugate

Product Specifications

Catalog Number:	SPA-820PE
Host:	Mouse
Isotype:	IgG_1
Species Reactivity:	Human, mouse, rat, beluga, cow, dog, chicken, fish (carp, chinook salmon, chum salmon, rainbow trout), guinea pig, hamster, monkey, mussel, pig, plant (cucumber, pea), rabbit, sheep, and *Xenopus*
Applications: *The optimal dilution for a specific application must be determined by the investigator*	Flow Cytometry: 10 µg/mL
Predicted M.W.:	~72 kDa (Hsp70) ~73 kDa (Hsc70)
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 Hsp70/Hsc70 protein
Related Products: NEW!	
SPA-820-488	Hsp70/Hsc70 Monoclonal Antibody (N27F34), DyLight™ 488 Conjugate
SPA-820	Hsp70/Hsc70 Monoclonal Antibody (N27F34)
SPP-751	Hsc70 (Hsp73) Recombinant Protein
NSP-555LYC-HL101	Hsp70 (Hsp72) Recombinant Protein
	HeLa Cell Lysate (Heat Shocked)



Flow cytometry analysis of 10^6 Jurkat cells using Hsp70/Hsc70 Monoclonal Antibody (N27F34), R-Phycoerythrin Conjugate at a concentration of 10 µg/mL

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[1]. 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[2]. Data demonstrates that with a ubiquitin-like domain at its amino terminus and its association with the 26S proteosome 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[3]. 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[4].

References:

1. Tavaria, M., *et al*. (1996) Cell Stress Chaperones **1**, 23-28.
2. Fink A.L. (1999) Physiol Rev. **79**, 425-449.
3. Luders, J., *et al*. (2000) J Biol Chem **275**, 4613-4617.
4. Stahl B., *et al*. (1999) Eur J Cell Biol. **78**, 375-381.