

Hsp60 Monoclonal Antibody (LK-2), R-Phycoerythrin Conjugate

New Conjugate Forms
Now Available!
DyLight™ 488 & PE

Product Specifications

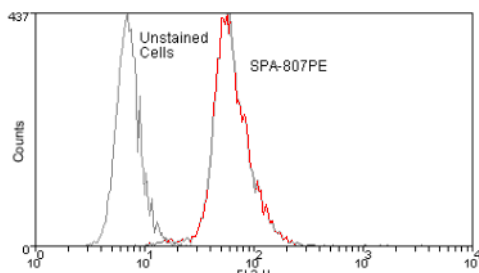
Catalog Number:	SPA-807PE
Host:	Mouse
Isotype:	IgG ₁
Species Reactivity:	Human, mouse, rat, cow, <i>C. elegans</i> , chicken, dog, guinea pig, hamster, monkey, pig, rabbit, plant (spinach, tomato), <i>Borellia</i> , <i>E. coli</i> (GroEL), <i>Helicobacter pylori</i> , <i>M. bovis</i> (Hsp65), <i>Salmonella typhimurium</i> , <i>Streptococcus pyogenes</i> , <i>Treponema hyodysenteriae</i> , <i>Treponema innocense</i> , <i>Trichinella spiralis</i> , white fly, <i>Yersinia enterocolitica</i> , yeast Other species not tested.
Applications: <i>The optimal dilution for a specific application must be determined by the investigator</i>	Flow Cytometry: 1:100 Other applications not tested.
Predicted m.w.:	~60 kDa
Concentration:	See product label
Purification:	Protein G Affinity
Format:	PBS, pH 7.2, 0.09% azide
Storage: <i>Shipping conditions may differ from the recommended storage temperature</i>	Store at 4 °C
Immunogen:	Recombinant human Hsp60 protein
Related Products:	
LYC-HL101	HeLa Cell Lysate (Heat Shocked)
NSP-540	Hsp60 Active Recombinant Protein
SAB-101	Goat anti-Mouse IgG Polyclonal Antibody, AP Conjugate
SPA-807	Hsp60 Monoclonal Antibody (LK-2)
NEW! SPA-807-488	Hsp60 Monoclonal Antibody (LK-2), DyLight™ 488 Conjugate

Background:

The human Hsp60 belongs to a family of molecular chaperones that is highly conserved across species such as plant Hsp60 (known as Rubisco binding protein), the *E. coli* Hsp60 GroEL, and the 65 kDa major antigen of mycobacteria. In eukaryotes, Hsp60 is localized in the mitochondrial matrix, and the plant Hsp60 in the chloroplast. Hsp60s from divergent species share a number of common characteristics: high abundance; induction with environmental stress such as heat shock; homo-oligomeric structures of either 7 or 14 subunits which reversibly dissociate in the presence of Mg²⁺ and ATP; ATPase activity; and a role in folding and assembly of oligomeric protein structures¹. These similarities correspond with studies in which the single-ring human mitochondrial homolog Hsp60 and its co-chaperonin Hsp10 were expressed in an *E. coli* strain engineered to keep the groE operon under strict regulatory control. The findings demonstrate that expression of Hsp60-Hsp10 enabled successful operation of all essential *in vivo* functions of GroEL and its co-chaperonin, GroES². Several studies reveal a possible link between members of the Hsp60 family and a number of autoimmune diseases, atherosclerosis and chlamydial disease. Overexpression of self Hsp60 is seen in the synovial tissue of rheumatoid arthritic (RA) patients, and can accompany both cellular and humoral reactivity against Hsp60 in RA³. Chlamydial heat shock protein Hsp60, a homolog of *E. coli* GroEL, appears capable of eliciting macrophage activation, and several studies reveal a correlation between Hsp60 responses and the immunopathologic manifestations of human chlamydial disease.

References:

- Jindal, S., et al. (1989) Mol and Cell Biol **9**, 2279-2283.
- Nielsen, K.L., et al. (1999) J Bacteriol. **181**, 5871-5875.
- Van Roon, J.A.G., et al. (1997) J Clin Invest. **100**, 459-463.



Flow cytometry analysis of 10⁶ Jurkat cells using Hsp60 Monoclonal Antibody (LK-2), PE Conjugate at a concentration of 10 µg/mL

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Last Revised: 4/4/2008