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HSP27 Antibody: FITC
HSP27 Antibody, Clone 5D12-A12: FITC
Catalog # ASM10131

Specification

HSP27 Antibody: FITC - Product Information

Primary Accession	P04792
Other Accession	NP_001531.1
Host	Mouse
Isotype	IgG2b Kappa
Reactivity	Human
Clonality	Monoclonal

Description
Mouse Anti-Human HSP27 Monoclonal IgG2b Kappa

Target/Specificity
Detects ~27kDa. No cross-reactivity to alphaB Crystallin.

Other Names
28kDa heat shock protein Antibody, CMT2F Antibody, HSP25 Antibody, HSP27 Antibody, HSP28 Antibody, HSPB1 Antibody, SRP27 Antibody

Immunogen
Human HSP27

Purification
Protein G Purified

Storage	-20ºC

Storage Buffer
PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature	Blue Ice or 4ºC

Certificate of Analysis
20 µg/ml of SMC-186 was sufficient for detection of HSP27 in human Jurkat cells by FACS analysis.

Cellular Localization
Cytoplasm | Nucleus

HSP27 Antibody: FITC - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation

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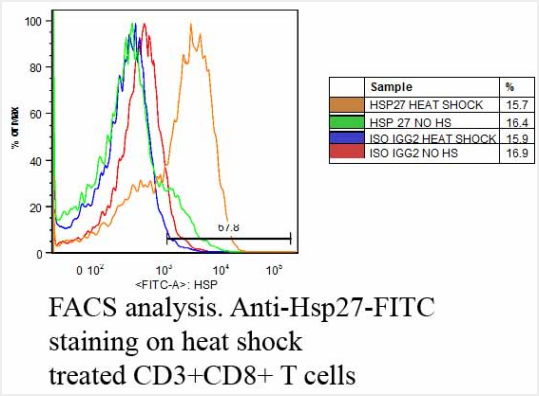
- Flow Cytomety
- Cell Culture

HSP27 Antibody: FITC - Images



FACS analysis. Anti-Hsp27-FITC staining on heat shock treated CD3+CD8+ T cells

Fluorescence Activated Cell Sorting analysis using Mouse Anti-Hsp27: FITC Monoclonal Antibody, Clone 5D12-A12 (ASM10131). Tissue: Heat Shocked CD3+ CD8+ T cells . Species: Mouse. Primary Antibody: Mouse Anti-Hsp27: FITC Monoclonal Antibody (ASM10131) at 1:1000. Courtesy of: Cheryl Cameron, Vaccine and Gene Therapy Instit. Florida.

HSP27 Antibody: FITC - Background

HSP27s belong to an abundant and ubiquitous family of small heat shock proteins (sHSP). It is an important HSP found in both normal human cells and cancer cells. The basic structure of most sHSPs is a homologous and highly conserved amino acid sequence, with an α-crystallin domain at the C-terminus and the WD/EPF domain at the less conserved N-terminus. This N-terminus is essential for the development of high molecular oligomers (1, 2). HSP27-oligomers consist of stable dimers formed by as many as 8-40 HSP27 protein monomers (3). The oligomerization status is connected with the chaperone activity: aggregates of large oligomers have high chaperone activity, whereas dimers have no chaperone activity (4). HSP27 is localized to the cytoplasm of unstressed cells but can redistribute to the nucleus in response to stress, where it may function to stabilize DNA and/or the nuclear membrane. Other functions include chaperone activity (as mentioned above), thermo tolerance in vivo, inhibition of apoptosis, and signal transduction. Specifically, in vitro, it acts as an ATP-independent chaperone by inhibiting protein aggregation and by stabilizing partially denatured proteins, which ensures refolding of the HSP70 complex. HSP27 is also involved in the apoptotic signaling pathway because it interferes with the activation of cytochrome c/Apaf-1/dATP complex, thereby inhibiting the activation of procaspase-9. It is also hypothesized that HSP27 may serve some role in cross-bridge formation between actin and myosin (5). And finally, HSP27 is also thought to be involved in the process of cell differentiation. The up-regulation of HSP27 correlates with the rate of phosphorylation and with an increase of large oligomers. It is possible that HSP27 may play a crucial role in termination of growth (6). For more information visit our HSP27 Scientific Resource Guide at http://www.HSP27.com.

HSP27 Antibody: FITC - References

1. Kim K.K., Kim R., and Kim, S. (1998) Nature 394(6693): 595-599.
2. Van Montfort R., Slingsby C., and Vierling E. (2001) Addv Protein Chem. 59: 105-56.
3. Ehrnsperger M., Graber S., Gaestel M. and Buchner J. (1997) EMBO J. 16: 221-229.
4. Ciocca D.R., Oesterreich S., Chamness G.C., McGuire W.L., and Fugua S.A. (1993) J Natl Cancer Inst. 85 (19): 1558-70.
5. Sarto C., Binnz P.A., and Mocarelli P. (2000) Electrophoresis. 21(6): 1218-26.
6. Arrigo A.P. (2005) J Cell Biochem. 94(2): 241-6.