

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

Specification

HSP27 Antibody: FITC - Product Information

Application **FACS**
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 **-20°C**

Storage Buffer

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

Shipping **Blue Ice or 4°C**

Temperature

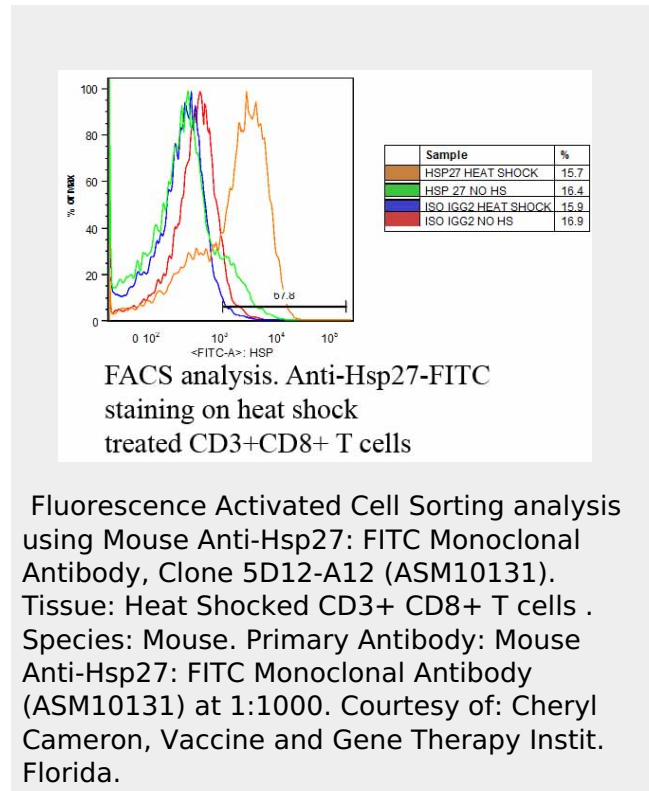
Certificate of Analysis

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



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

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

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) Adv 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., Binzn P.A., and Mocarelli P. (2000) Electrophoresis. 21(6): 1218-26.
6. Arrigo A.P. (2005) J Cell Biochem. 94(2): 241-6.