

HSP27 ELISA Kit



Antibodies • Proteins • Kits • Small Molecules

Heat Shock Protein 27 (HSP27) StressXpress® ELISA Kit

Catalog No.

Size

Purpose: ELISA kit used to quantitate the HSP27 concentration in samples

SKT-109-96

96-well

SKT-109-480

5 x 96-well

Kit Specifications

Species Reactivity:	Human
Sample Type:	Cell Lysates Tissue Extracts Serum Samples
Sensitivity:	0.04 ng/ml
Assay Range:	0.2-13 ng/ml
Incubation Time:	30 minutes
Storage Temp:	4°C
Shipping Temp:	4°C

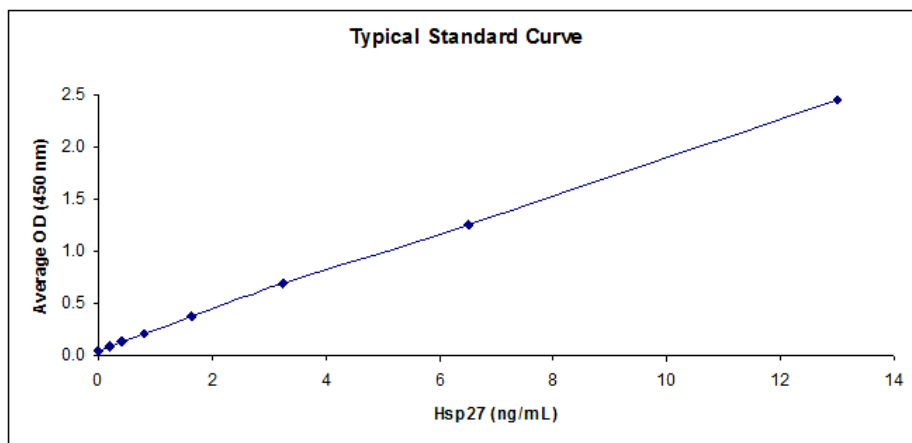
Kit Components:

- Anti-HSP27 Immunoassay Plate
- 5X HSP27 Extraction Reagent
- Recombinant HSP27 Standard
- Standard and Sample Diluent
- 10X Wash Buffer Concentrate
- Anti-HSP27 Biotinylated Antibody Concentrate
- Anti-HSP27 Biotinylated Antibody Diluent
- Streptavidin: HRP Concentrate
- Streptavidin: HRP Diluent
- TMB Substrate
- Stop Solution

StressMarq Biosciences is pleased to provide you with StressMarq's StressXpress® Hsp27 ELISA Kit. StressMarq's Hsp27 ELISA Kit is for the detection of free, unbound human Hsp27 in cell lysates, tissue extracts and human serum samples.

Research 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 alpha-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. Hsp27-oligomers consist of stable dimers formed by as many as 8-40 Hsp27 protein monomers. The oligomerization status is connected with the chaperone activity: aggregates of large oligomers have high chaperone activity, whereas dimers have no chaperone activity. 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), thermotolerance 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. 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.



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For a complete list of available products, please visit: www.stressmarq.com

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