Datasheet for ABIN1686697

HSP27 Protein (full length)

Go to Product page

1 Image

Overview

Quantity:	100 µg
Target:	HSP27 (HSPB1)
Protein Characteristics:	full length
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Application:	Western Blotting (WB), ELISA, SDS-PAGE (SDS), Functional Studies (Func)

Product Details

Sequence:	MTERRVPFSL LRGPSWDPFR DWYPHSRLFD QAFGLPRLPE EWSQWLGGSS WPGYVRPLPP AAIESPAVAA PAYSRALSRQ LSSGVSEIRH TADRWRVSLD VNHFAPDELT VKTKDGVVEI TGKHEERQDE HGYISRCFTR KYTLPPGVDP TQVSSSLSPE GTLTVEAPMP KLATQSNEIT IPVTFESRAQ LGGPEAAKSD ETAAK
Specificity:	~27 kDa
Purification:	Affinity Purified
Purity:	>90%

Target Details

Target:	HSP27 (HSPB1)
Alternative Name:	Hsp27 (HSPB1 Products)
Background:	HSP27s belong to an abundant and ubiquitous family of small heat shock proteins (sHSP). It is

Target Details

	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). Looking for more information on HSP27? Visit our new HSP27 Scientific Resource Guide at http://www.HSP27.com.
Molecular Weight:	approx. 27 kDa
Gene ID:	3315
UniProt:	P04792
Pathways:	MAPK Signaling, Regulation of Actin Filament Polymerization, Signaling Events mediated by VEGFR1 and VEGFR2, Negative Regulation of intrinsic apoptotic Signaling, VEGF Signaling

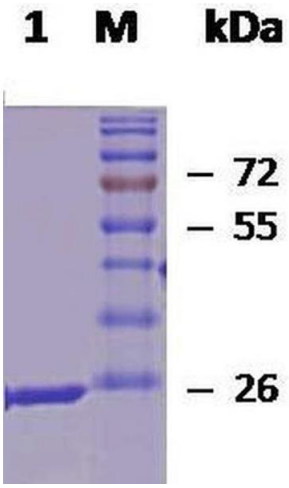
Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	This product has been certified >90% pure using SDS-PAGE analysis.
Restrictions:	For Research Use only

Handling

Concentration:	Lot specific
Buffer:	20 mM Tris/HCl pH 7.5, 0.45M NaCl, 10 % glycerol, 5 mM DTT
Storage:	-20 °C

Images



SDS-PAGE

Image 1. SDS-PAGE of 27 kDa native human Hsp27 protein (ABIN1686696, ABIN1686697 and ABIN1686698).