Datasheet for ABIN1027725

anti-HSP27 antibody

4 Images | 1 Publication

Go to Product page

Overview

Quantity:	50 µg
Target:	HSP27 (HSPB1)
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This HSP27 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Flow Cytometry (FACS), Immunocytochemistry (ICC)

Product Details

Immunogen:	Human HSP27, His tagged
Specificity:	Detects ~27 kDa.
Cross-Reactivity:	Dog, Human, Mouse, Shark
Purification:	Protein A Purified

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 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

Target Details

	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.
Gene ID:	3315
NCBI Accession:	NP_001531
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:	• WB (1:2000) • ICC/IF (1:250) • optimal dilutions for assays should be determined by the user.
Comment:	A 1:2000 dilution of ABIN1027725 was sufficient for detection of HSP27 in 20 µg of HeLa cell lysate by ECL immunoblot analysis.
Restrictions:	For Research Use only

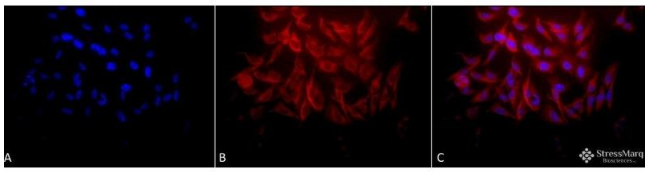
Handling

Format:	Liquid
Concentration:	1.38 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

Publications

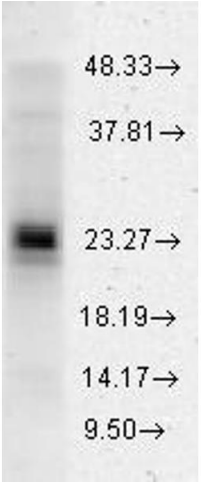
Product cited in:	Asai, Kawashima, Katagiri, Takeuchi, Tohnai, Ohtsuka: "Protective effect of a molecular chaperone inducer, paeoniflorin, on the HCl- and ethanol-triggered gastric mucosal injury." in: **Life sciences**, Vol. 88, Issue 7-8, pp. 350-7, (2011) (PubMed).

Images



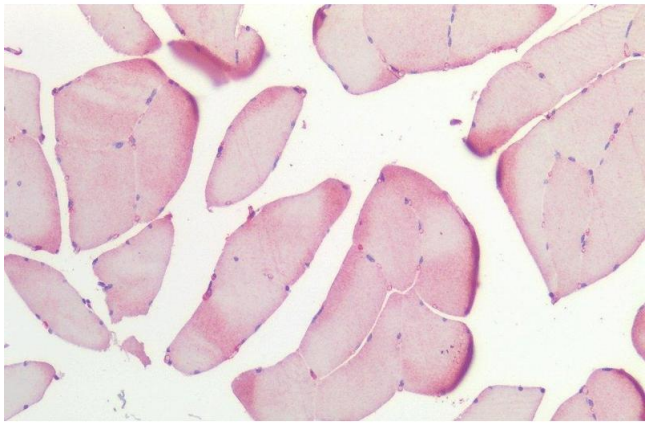
Immunocytochemistry

Image 1. Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-Hsp27 Polyclonal Antibody (ABIN1027725 and ABIN1027726). Tissue: Heat Shocked Cervical cancer cell line (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-Hsp27 Polyclonal Antibody (ABIN1027725 and ABIN1027726) at 1:250 for 12 hours at 4 °C. Secondary Antibody: APC Goat Anti-Rabbit (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Cytoplasm. Mitochondrion matrix. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-Hsp27 Antibody. (C) Composite. Heat Shocked at 42 °C for 1h.



Western Blotting

Image 2. Hsp27 Hela Western Blotting 1 in 2000.



Immunohistochemistry

Image 3. Immunohistochemistry analysis using Rabbit Anti-HSP27 Polyclonal Antibody (ABIN1027725 and ABIN1027726). Tissue: Skeletal Muscle. Species: Human. Fixation: Formalin fixed paraffin-embedded. Primary Antibody: Rabbit Anti-HSP27 Polyclonal Antibody (ABIN1027725 and ABIN1027726).

Please check the product details page for more images. Overall 4 images are available for ABIN1027725.