

Rabbit HSP27 Polyclonal Antibody | anti-HSP27 antibody

HSP27 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA325847	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

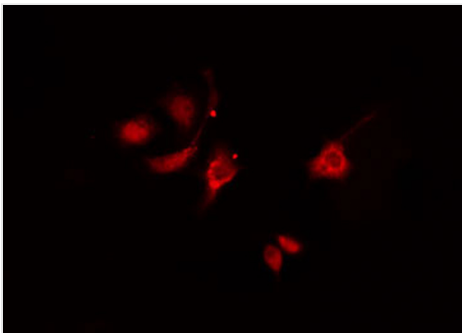
PRODUCT SYNONYMS

HSP27; Polyclonal Antibody; HSP27 Antibody; Heat shock 27kDa protein; 28 kDa heat shock protein; CMT2F; DKFZp586P1322; epididymis secretory protein Li 102; Estrogen regulated 24 kDa protein; Estrogen-regulated 24 kDa protein; Heat shock 25kDa protein 1; Heat shock 27 kDa protein; Heat shock 27kD protein 1; Heat shock 27kDa protein 1; Heat shock 28kDa protein 1; Heat Shock Protein 27; Heat shock protein beta 1; Heat shock protein beta-1; heat shock protein family B (small) member 1; HEL-S-102; HMN2B; HS.76067; Hsp 25; HSP 27; Hsp 28; Hsp B1; Hsp25; Hsp28; HspB1; HSPB1_HUMAN; SRP27; Stress responsive protein 27; Stress-responsive protein 27; anti-HSP27 antibody

PRODUCT SPECIFICATIONS

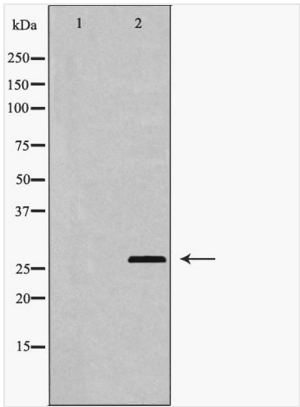
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	HSP27 antibody detects endogenous levels of total HSP27
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	205
Applicable Applications for anti-HSP27 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human HSP27
Subcellular Location	Cytoplasm. Nucleus. Cytoplasm > Cytoskeleton > Spindle. Cytoplasmic in interphase cells. Colocalizes with mitotic spindles in mitotic cells. Translocates to the nucleus during heat shock and resides in sub-nuclear structures known as SC35 speckles or nuclear splicing speckles.
Tissue Specificity	Detected in all tissues tested: skeletal muscle, heart, aorta, large intestine, small intestine, stomach, esophagus, bladder, adrenal gland, thyroid, pancreas, testis, adipose tissue, kidney, liver, spleen, cerebral cortex, blood serum and cerebrospinal fluid. Highest levels are found in the heart and in tissues composed of striated and smooth muscle.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

AAA325847 staining HeLa cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.



WB (Western Blot)

Western blot analysis of extracts of HUVEC, using HSP27 antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-HSP27 antibody

Description: Heat shock protein (HSP) 27 is one of the small HSPs that are constitutively expressed at different levels in various cell types and tissues. Like other small heat shock proteins, HSP27 is regulated at both the transcriptional and posttranslational levels (1). In response to stress, the expression level of HSP27 increases several-fold to confer cellular resistance to the adverse environmental change. HSP27 is phosphorylated at Ser15, Ser78 and Ser82 by MAPKAP kinase 2 as a result of the activation of the p38 MAP kinase pathway (2, 3). Phosphorylation of HSP27 causes a change in its tertiary structure, which shifts from large homotypic multimers to dimers and monomers (4). It has been shown that phosphorylation and increased concentration of HSP27 modulates actin polymerization and reorganization (5, 6).

Function: Small heat shock protein which functions as a molecular chaperone probably maintaining denatured proteins in a folding-competent state (PubMed:10383393, PubMed:20178975). Plays a role in stress resistance and actin organization (PubMed:19166925). Through its molecular chaperone activity may regulate numerous biological processes including the phosphorylation and the axonal transport of neurofilament proteins (PubMed:23728742).

Subunit Structure: Homooligomer (PubMed:10383393). Homodimer; becomes monomeric upon activation (PubMed:20178975). Heterooligomer; with HSPB6 (PubMed:23948568). Associates with alpha-and beta-tubulin (PubMed:10777697). Interacts with TGFB1I1 (By similarity). Interacts with CRYAB (PubMed:1560006). Interacts with HSPB8 (PubMed:11342557). Interacts with HSPBAP1 (PubMed:10751411).

Post-translational Modifications: Phosphorylated upon exposure to protein kinase C activators and heat shock (PubMed:8325890). Phosphorylation by MAPKAPK2 and MAPKAPK3 in response to stress dissociates HSPB1 from large small heat-shock protein (sHsps) oligomers and impairs its chaperone activity and ability to protect against oxidative stress effectively. Phosphorylation by MAPKAPK5 in response to PKA stimulation induces F-actin rearrangement (PubMed:1332886, PubMed:8093612, PubMed:19166925).

Similarity: Belongs to the small heat shock protein (HSP20) family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4504517
NCBI GeneID	3315
NCBI Accession #	NP_001531.1
NCBI GenBank Nucleotide #	NM_001540.4
UniProt Accession #	P04792; Q6FI47; Q96C20; Q96EI7; Q9UC31; Q9UC34; Q9UC35; Q9UC36; B2R4N8
Molecular Weight	Observed: 27 kDa Predicted: 23 kDa
NCBI Official Full Name	heat shock protein beta-1
NCBI Official Synonym Full Names	heat shock protein family B (small) member 1

NCBI Official Symbol	HSPB1
NCBI Official Synonym Symbols	CMT2F; HMN2B; HSP27; HSP28; Hsp25; SRP27; HS.76067; HEL-S-102
NCBI Protein Information	heat shock protein beta-1
UniProt Protein Name	Heat shock protein beta-1
UniProt Gene Name	HSPB1
UniProt Synonym Gene Names	HSP27; HSP28; HspB1; HSP 27; SRP27

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/hsp27-antibody-immunocytochemistry-immunofluorescence-western-blot-elisa/325847>