HSP25 polyclonal antibody

Hsp25 is a member of the family of small heat shock proteins (sHsps), an evolutionarily conserved family of stress proteins which exhibit moleclular weights between 14-45 kDa. The sHsps are related to the alpha-crystallins, and generally exist as large oligomeric complexes that serve to stabilize and assist in refolding of denatured proteins. Hsp25 is highly homologous to the human Hsp27, and its expression is seen in many species, including mouse, rat, bovine, canine, and hamster cells.

This antibody is covered by our Worry-Free Guarantee.

Citations: 80 View Online »

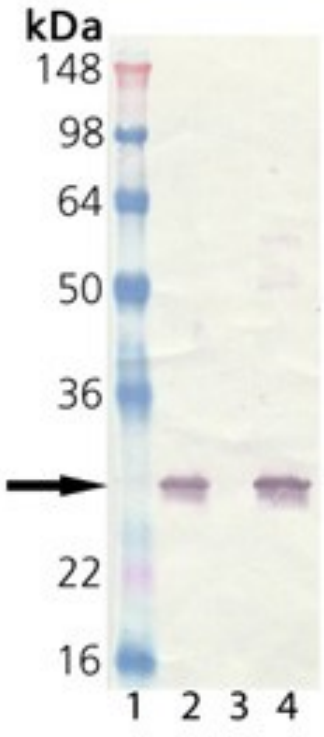
Ordering Information

Order Online »

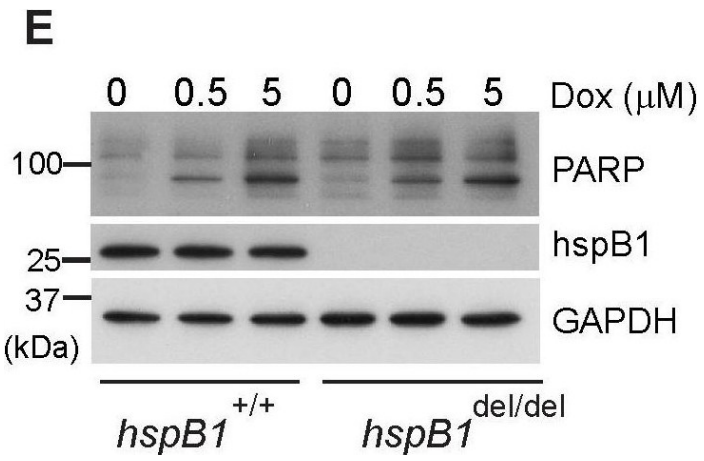
ADI-SPA-801-D	50µg
ADI-SPA-801-F	200µg

Manuals, SDS & CofA

View Online »

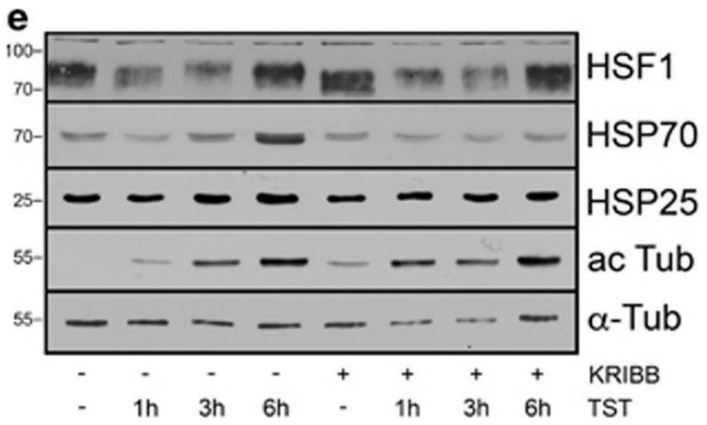


Western Blot analysis of HSP25, pAb. Lane 1: MW Marker; Lane 2: PC-12 Cell Lysate (Heat Shock), Lane 3: 3T3 Cell Lysate (Heat Shock), Lane 4: HSP25 (mouse), (recombinant) (Prod. No. ADI-SPP-510).



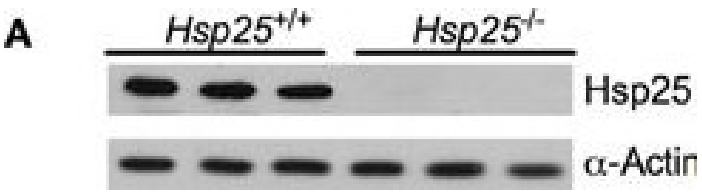
HspB1 deficiency increases IL-1-induced IL-6 expression and inhibits proliferation in fibroblasts.A, Primary wild-type and hspB1del/del MEF were treated with IL-1 (20 ng/ml) for 4 h or left untreated. Graph shows the concentration of IL-6 in culture medium as determined by ELISA and normalised against values for IL-1-treated wild-type MEF for three separate batches of cells (*P<0.05). B, MEF were treated as in (A), lysed, RNA extracted and IL-6 and GAPDH mRNAs quantified by qRT-PCR. Plot shows IL-6 mRNA/GAPDH mRNA normalised to the value for wild-type cells treated with IL-1 for 1 h. C, Growth curve analysis (means±SEM) of wild-type and hspB1del/del MEF determined by MTT assay at different days post-seeding (n = 3; *P<0.05, **P<0.01, ***P<0.001) or by counting trypan-blue excluded cells (n = 2). D, Plot of mean (%) TUNEL-positive (± SEM) cells for three different batches of MEF per genotype. E, MEF were treated with different concentrations of doxorubicin (as indicated) for 8 h to induce apoptosis, or left untreated, cells lysed and lysates analysed by western blot for the full-length and the cleaved form of PARP. Similar results were obtained in three independent experiments.

Image collected and cropped by CiteAb under a CC-BY license from the following publication: Heat shock protein B1-deficient mice display impaired wound healing. *PLoS One* (2013)



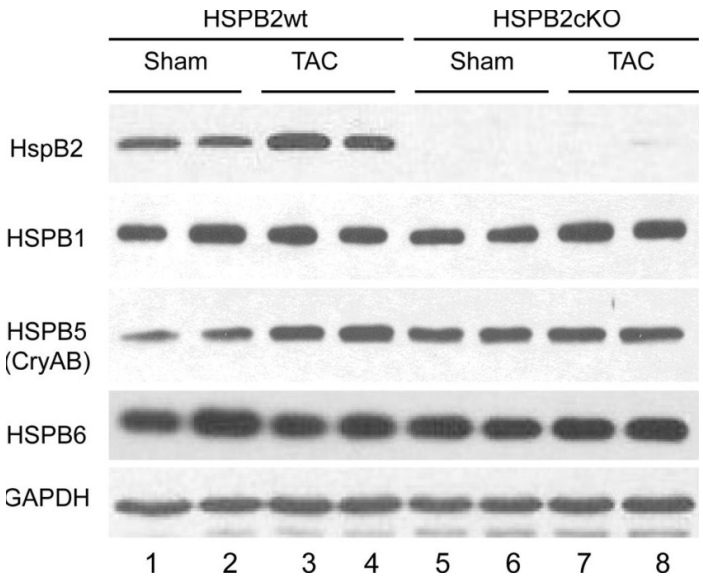
Tubastatin A induces heat-shock protein expression by activating heat-shock factor 1. 661W cells were treated with 1, 5 and 10 μM of tubastatin A (TST) for 24 h (a), or in (b) with 10 μM TST for 8 h, or with 200 μM H2O2 for 6 h or were preincubated with 10 μM TST for 2 h followed by incubation with 200 μM H2O2 for 6 h. ac Tub, acetylated tubulin. α-Tub, α-tubulin. Co, untreated control. Quantitative evaluation of immunoblot analysis revealed a significant increase in heat-shock protein (HSP) 70 level after 8 h (c), while HSP25 was significantly enhanced after 24 h (d); n=4. (e) Heat-shock factor 1 (HSF1) activity was investigated using immunoblot analysis of 661W cell extracts that were treated 10 μM TST for 1, 3 and 6 h, or with 5 μM KRIBB11 (KR) for 6.5 h alone, or preincubated with 5 μM KR for 30 min, followed by incubation with 10 μM TST for 1–6 h. (f) Cell viability MTT assay. Cells were treated as indicated. TST (10 μM) for 8 h or KR (5 μM) for 8.5 h did not influence 661W cell number. H2O2 (200 μM) for 6 h led to a strong decrease in cell viability, which was enhanced by pre-incubation with TST for 2 h (TST+H2O2). Pre-incubation with KR for 30 min followed by incubation with TST for 2 h followed by treatment with H2O2 for 6 h (KR+TST+H2O2) did not diminish the protective effect of TST. Experiments were carried out three times with similar results. Data represent the mean±S.D. of one representative experiment with eight replicates and are expressed as the percent of the untreated control, which was set at 100%

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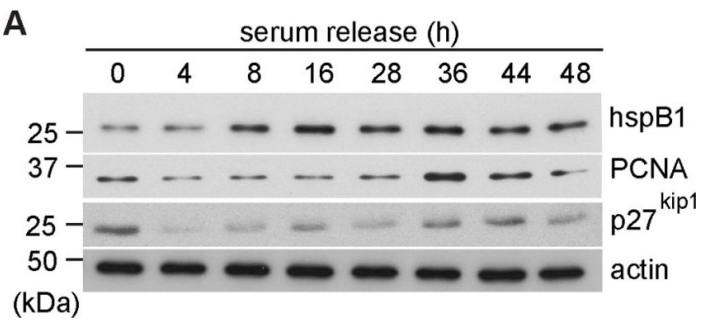
(A) Gastrocnemius muscle HSP25 and actin protein levels in Hsp25+/+ and Hsp25−/− mice verifying the absence of HSP25. (B) HSP25 protein levels in young and old Hsp25+/+ mice under sedentary conditions or following 14 days of running wheel activity. #Significantly different from sedentary ($P < 0.0001$), †significant main effect of age ($P < 0.0001$). Representative western blot showing HSP25 in sedentary and running wheel young and old Hsp25+/+ mice. Data are presented as means ± SE, n = 8 for all groups.

Image collected and cropped by CiteAb under a CC-BY license from the following publication: Effect of HSP25 loss on muscle contractile function and running wheel activity in young and old mice. *Front Physiol* (2014)



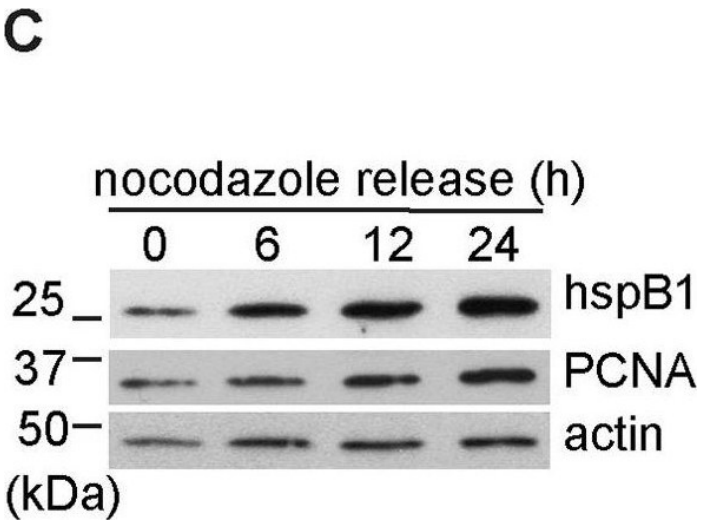
No significant changes in expression of small HSP in the absence of HSPB2 and/or under cardiac stress conditions.Hearts from HSPB2wt and HSPB2cKO were isolated at 8 weeks after sham or TAC procedure and protein extracts (soluble fraction) were analyzed by western blots probed with anti-HSPB2, HSPB1 (HSP25), HSPB5 (CRYAB) and HSPB6 (HSP20). In contrast to transcripts, protein levels were not significantly modified in samples from TAC operated mice and except for HSPB2, there was no difference between HSPB2cKO and HSPB2wt samples. Two to five samples were analyzed per group and a representative example is shown.

Image collected and cropped by CiteAb under a CC-BY license from the following publication: HSPB2 is dispensable for the cardiac hypertrophic response but reduces mitochondrial energetics following pressure overload in mice. *PLoS One* (2012)



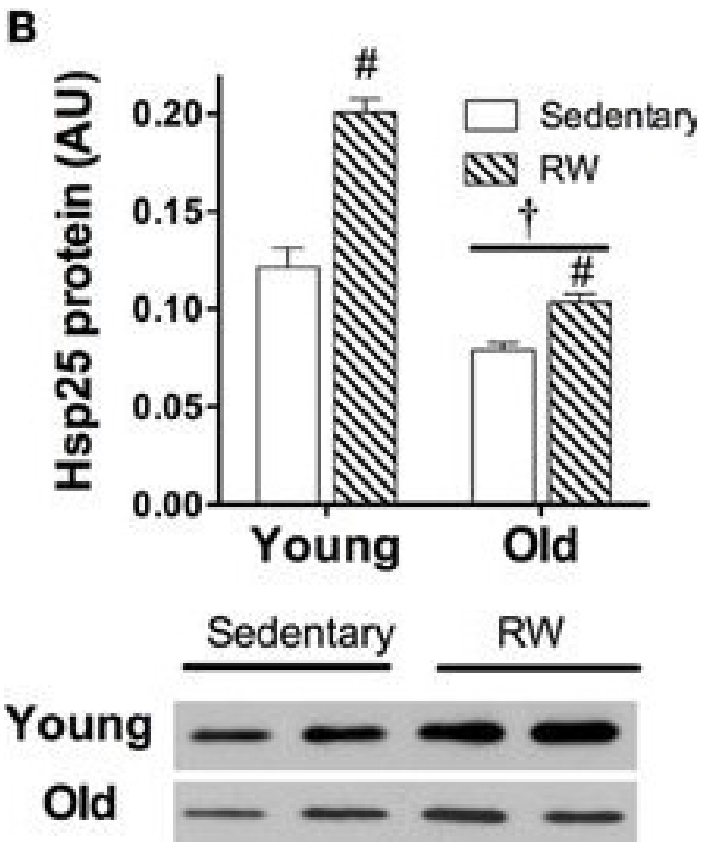
Expression of hspB1 protein and mRNA is controlled by the cell cycle.A, MEF were synchronized by serum starvation for 48% FCS-containing medium and analysed by western blot for hspB1, PCNA, p27kip1 and actin. B, Comparison of the expression of mRNAs for hspB1 and the cell cycle-regulated genes, Myc, and Cyclin E1 determined by qRT-PCR and normalized to GAPDH in a representative synchronized MEF serum release time course. C, Western blot for hspB1, PCNA and loading control, actin, in lysates of MEF following release from nocodazole G2/M block (40 ng/ml). All western blots shown are representative of at least two independent experiments.

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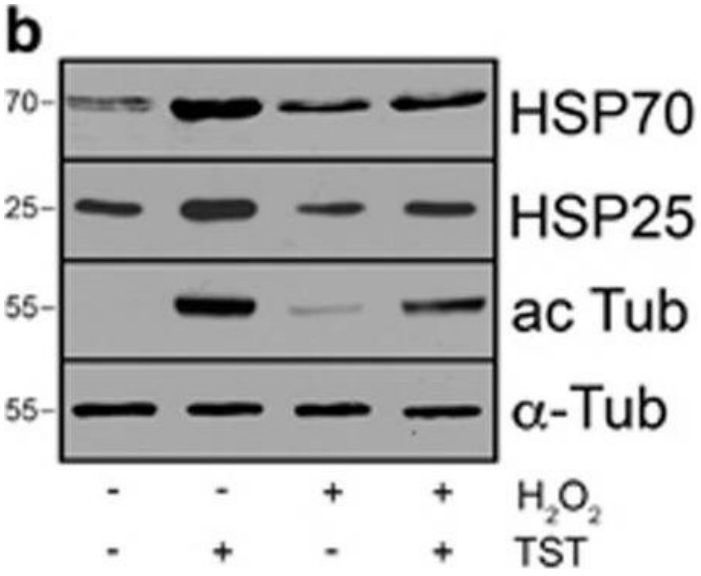
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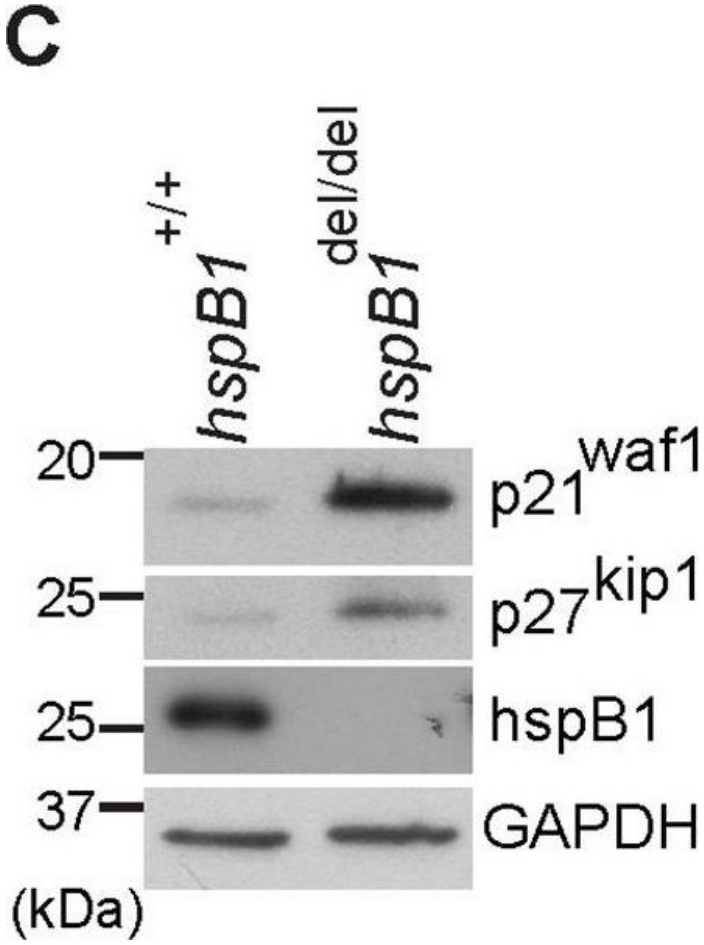
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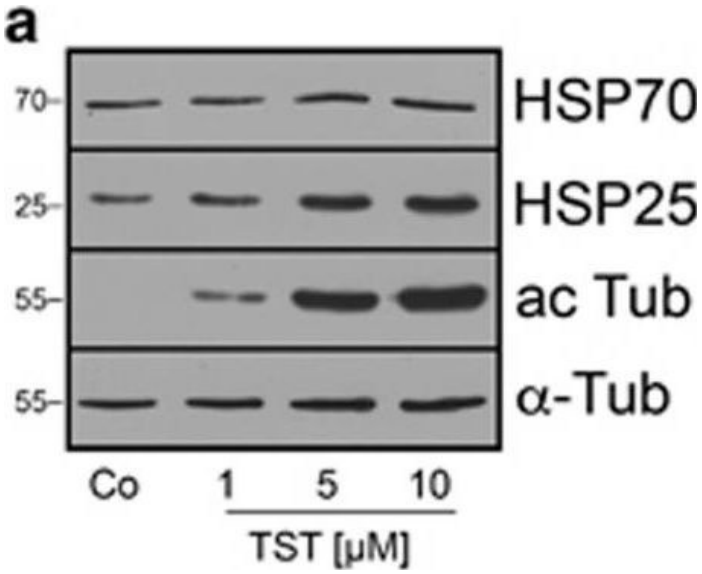
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HspB1 deficiency inhibits entry into S phase and increases the expression of p21waf1 and p27 kip1.A, BrdU incorporation following a 2-positive cells (mean % ± SEM) from three independent experiments performed; **P<0.01. C, Western blot of asynchronous MEF lysates for p21waf1, p27kip1, hspB1 and GAPDH as a loading control with molecular weights (kDa) of markers indicated. Western blots are representative of three independent experiments.

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Handling & Storage

Handling	Avoid freeze/thaw cycles.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	HspB1, Heat shock protein 25
Application	Electron microscopy, ICC, IF, IP, WB
Application Notes	Detects a band of ~25kDa by Western blot.
Formulation	Liquid. In PBS, pH 7.2, containing 50% glycerol and 0.09% sodium azide.
GenBank ID	L07577
Host	Rabbit
Immunogen	Recombinant mouse Hsp25.
Purity Detail	Protein A affinity purified.
Recommendation Dilutions/Conditions	Immunoprecipitation (1:100)Western Blot (1:1,000, colorimetric)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Source	Purified from rabbit serum.
Species Reactivity	Bovine, Dog, Gerbil, Guinea pig, Hamster, Human, Mouse, Porcine, Rat
UniProt ID	P14602
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

Last modified: May 29, 2024

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