

## Basic Information

<b>Product Name</b>	Anti-HSP27/HSPB1 Antibody (Clone#3H3)	
<b>Gene Name</b>	HSPB1	
<b>Source</b>	Mouse	
<b>Clonality</b>	Monoclonal	
<b>Isotype</b>	IgG1	
<b>Species Reactivity</b>	human	
<b>Tested Application</b>	WB, IHC, ICC/IF, FCM	
<b>Contents</b>	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.	
<b>Immunogen</b>	E.coli-derived human Hsp27/HSPB1 recombinant protein (Position: M1-K205). Human Hsp27 shares 83% amino acid (aa) sequence identity with mouse Hsp27.	
<b>Concentration</b>	500 ug/ml	
<b>Purification</b>	protein G purified.	
<b>Observed MW</b>	27 kDa	
<b>Dilution Ratios</b>	Western blot (WB):	1:500-2000
	Immunohistochemistry (IHC):	1:50-400
	Immunocytochemistry/Immunofluorescence (ICC/IF):	1:50-400
	Flow Cytometry (Fixed):	1:50-200
	(Boiling the paraffin sections in 10mM citrate buffer, pH6.0, or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

## Storage

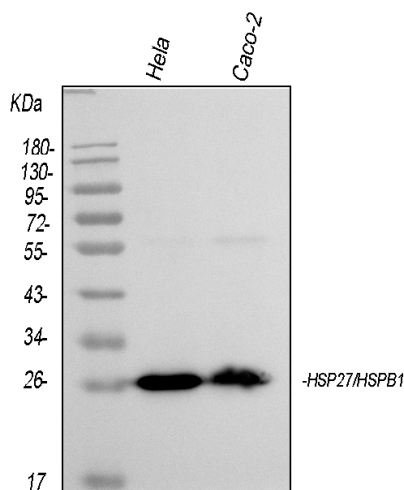
12 months from date of receipt, -20°C as supplied.

## Background Information

The heat-shock proteins (HSPs) belong to a larger group of polypeptides, the stress proteins, that are induced in various combinations in response to environmental challenges and developmental transitions. Heat-shock 27-kD protein also known as HSPB. Synthesis of the small (27-kD) HSP has been shown to be correlated with the acquisition of thermotolerance. HSP27 gene is mapped to 7q11.23. Mutant small heat-shock protein 27 causes axonal Charcot-Marie-Tooth disease and distal hereditary motor neuropathy. Heat shock protein 27 prevents cellular polyglutamine toxicity

and suppresses the increase of reactive oxygen species caused by huntingtin.

## Selected Validation Data



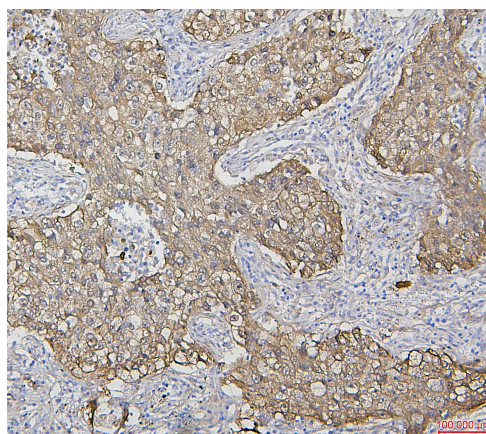
Western blot analysis of HSP27/HSPB1 using anti-HSP27/HSPB1 antibody (M00676-5). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: HeLa whole cell lysates,

Lane 2: Caco-2 whole cell lysates.

After electrophoresis, proteins were transferred to a membrane.

Then the membrane was incubated with mouse anti-HSP27/HSPB1 antigen affinity purified monoclonal antibody (M00676-5) at a dilution of 1:1000 and probed with a goat anti-mouse IgG-HRP secondary antibody (Catalog # BA1050). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for HSP27/HSPB1 at approximately 27 kDa. The expected band size for HSP27/HSPB1 is at 23 kDa.



IHC analysis of HSP27/HSPB1 using anti-HSP27/HSPB1 antibody (M00676-5).

HSP27/HSPB1 was detected in a paraffin-embedded section of human lung cancer tissue. Biotinylated goat anti-mouse IgG was used as secondary antibody. The tissue section was incubated with mouse anti-HSP27/HSPB1 Antibody (M00676-5) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB (Catalog # AR1027) as the chromogen.

Product datasheet  
**Anti-HSP27/HSPB1 Antibody**  
**(Clone#3H3)**  
**Catalog Number: M00676-5**

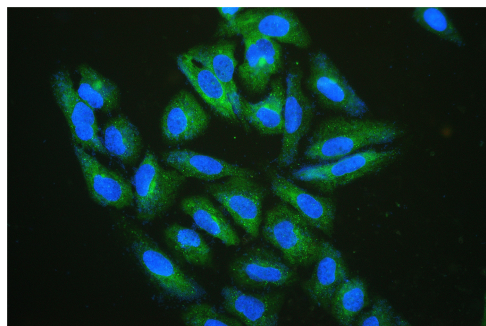
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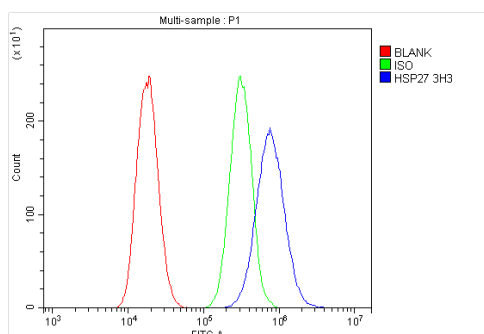
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ICC/IF analysis of HSP27 using anti- HSP27 antibody (M00676-5) HSP27 was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2µg/mL mouse anti- HSP27 Antibody (M00676-5) overnight at 4°C. Fluoro488 Conjugated Goat Anti-mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of A549 cells using anti-HSP27/HSPB1 antibody (M00676-5).

Overlay histogram showing A549 cells stained with M00676-5 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-HSP27/HSPB1 Antibody (M00676-5) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.