abcam

Product datasheet

Anti-Hsp27 antibody [G3.1] ab2790

6 Abreviews 45 References 6 Images

Overview

Product name	Anti-Hsp27 antibody [G3.1]
Description	Mouse monoclonal [G3.1] to Hsp27
Host species	Mouse
Tested applications	**Suitable for:** Flow Cyt, ICC/IF, IHC-P, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Chicken, Cow, Pig
Immunogen	Full length native protein (purified) corresponding to Human Hsp27. (Partially purified human HSP27)
Positive control	WB: Hela whole cell lysate; ICC/IF: MCF7 cells; Flow Cyt: MCF7 cells; IHC-P: Human breast carcinoma and human prostate carcinoma.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: PBS, 0.05% BSA
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	G3.1
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2790 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use a concentration of 1 - 2 µg/ml. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF		Use a concentration of 1 - 2 µg/ml.
IHC-P		Use a concentration of 1 - 2 µg/ml. Perform heat mediated antigen retrieval using 10 mM Tris with 1 mM EDTA, pH 9.0, for 45 minutes at 95°C followed by cooling at room temperature for 20 minutes. Incubate with primary for 30 minutes at room temperature.
WB	★★★★★ (4)	Use a concentration of 0.25 - 0.5 µg/ml.

Target

Function Involved in stress resistance and actin organization.

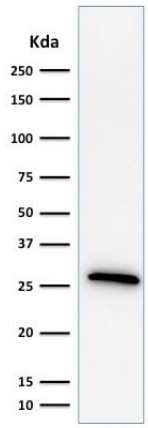
Tissue specificity Detected in all tissues tested: skeletal muscle, heart, aorta, large intestine, small intestine, stomach, esophagus, bladder, adrenal gland, thyroid, pancreas, testis, adipose tissue, kidney, liver, spleen, cerebral cortex, blood serum and cerebrospinal fluid. Highest levels are found in the heart and in tissues composed of striated and smooth muscle.

Involvement in disease Defects in HSPB1 are the cause of Charcot-Marie-Tooth disease type 2F (CMT2F) [MIM:606595]. CMT2F is a form of Charcot-Marie-Tooth disease, the most common inherited disorder of the peripheral nervous system. Charcot-Marie-Tooth disease is classified in two main groups on the basis of electrophysiologic properties and histopathology: primary peripheral demyelinating neuropathy or CMT1, and primary peripheral axonal neuropathy or CMT2. Neuropathies of the CMT2 group are characterized by signs of axonal regeneration in the absence of obvious myelin alterations, normal or slightly reduced nerve conduction velocities, and progressive distal muscle weakness and atrophy. Nerve conduction velocities are normal or slightly reduced. CMT2F onset is between 15 and 25 years with muscle weakness and atrophy usually beginning in feet and legs (peroneal distribution). Upper limb involvement occurs later. CMT2F inheritance is autosomal dominant.
Defects in HSPB1 are a cause of distal hereditary motor neuronopathy type 2B (HMN2B) [MIM:608634]. Distal hereditary motor neuronopathies constitute a heterogeneous group of neuromuscular disorders caused by selective impairment of motor neurons in the anterior horn of the spinal cord, without sensory deficit in the posterior horn. The overall clinical picture consists of a classical distal muscular atrophy syndrome in the legs without clinical sensory loss. The disease starts with weakness and wasting of distal muscles of the anterior tibial and peroneal compartments of the legs. Later on, weakness and atrophy may expand to the proximal muscles of the lower limbs and/or to the distal upper limbs.

Sequence similarities Belongs to the small heat shock protein (HSP20) family.

Post-translational modifications	Phosphorylated in MCF-7 cells on exposure to protein kinase C activators and heat shock.
Cellular localization	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.

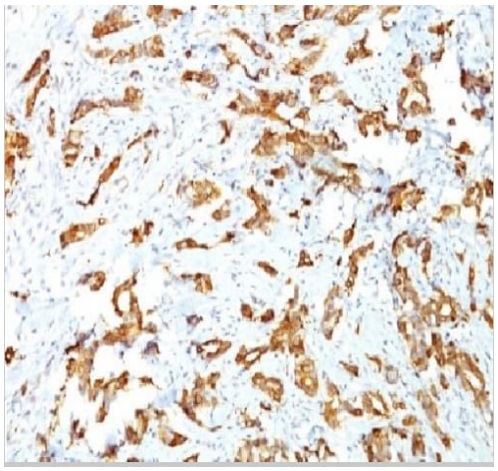
Images



Western blot - Anti-Hsp27 antibody [G3.1] (ab2790)

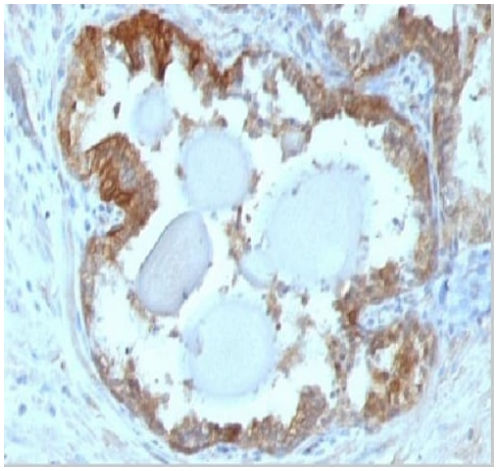
Anti-Hsp27 antibody [G3.1] (ab2790) + HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Observed band size: 27 kDa



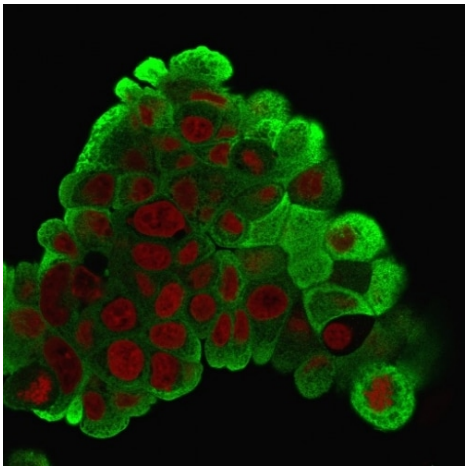
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Hsp27 antibody [G3.1] (ab2790)

Immunohistochemistry of paraffin embedded human breast carcinoma with ab2790 labeling Hsp27 at 0.5µg/ml.



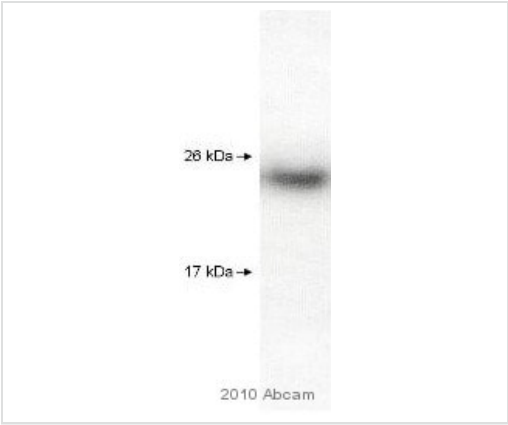
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Hsp27 antibody [G3.1] (ab2790)

Immunohistochemistry of paraffin embedded human prostate carcinoma with ab2790 labeling Hsp27 at 0.5µg/ml.



Immunocytochemistry/ Immunofluorescence - Anti-Hsp27 antibody [G3.1] (ab2790)

Immunocytochemistry/immunofluorescence analysis of paraformaldehyde fixed MCF7 (human breast adenocarcinoma cell line) cells labelling Hsp27 with ab2790 at 2 µg/mL. Goat Anti-Mouse IgG was used as the secondary antibody (green). Nuclear DNA labelled red.



Western blot - Anti-Hsp27 antibody [G3.1] (ab2790)

This image is courtesy of an Abreview submitted by Brian Hitt

Anti-Hsp27 antibody [G3.1] (ab2790) at 1/1000 dilution + Mouse whole brain tissue lysate. at 10 µg

Secondary

An HRP-conjugated Goat polyclonal. at 1/10000 dilution

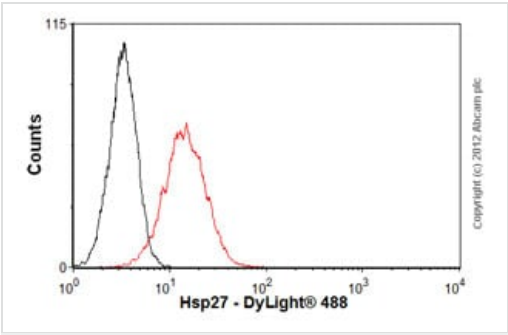
Developed using the ECL technique.

Observed band size: 24 kDa

Exposure time: 5 minutes

Blocking Step: 5% Milk for 1 hour at 25°C.

Gel Running Conditions: Reduced, Denaturing Bis-tris 4-12%



Flow Cytometry - Anti-Hsp27 antibody [G3.1] (ab2790)

Overlay histogram showing HeLa cells (**ab150035**) stained with ab2790 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum (**ab7481**) / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab2790, 1/100 dilution) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.

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