abcam

Product datasheet

Anti-Hsp27 antibody ab12351

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Overview

Product name	Anti-Hsp27 antibody
Description	Rabbit polyclonal to Hsp27
Host species	Rabbit
Specificity	This antibody detects an 25 kDa protein, corresponding to the apparent molecular mass of Heat Shock Protein 27 (Hsp27) on SDS-PAGE immunoblots. This antibody has been shown to react with both the phosphorylated and the non-phosphorylated forms of Hsp27. Note: It has been reported that certain murine cell lines do not express Hsp27 under certain conditions. This antibody also recognizes a mitochondrial small Hsp (35 kDa) in rat PC12 cells. This mitochondrial small Hsp is proposed to protect mitochondrial complex I from oxidative stress.
Tested applications	**Suitable for:** IHC, WB
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Pig, Monkey
Immunogen	Recombinant full length protein corresponding to Human Hsp27. Database link: P04792
General notes	For maximum product recovery, after thawing, centrifuge the product vial before removing cap. 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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine)
Purity	Protein A purified
Clonality	Polyclonal

Isotype	IgG

Applications

The Abpromise guarantee Our Abpromise guarantee covers the use of ab12351 in the following tested applications.

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

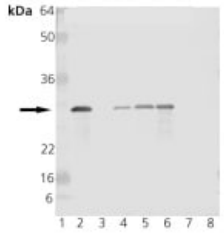
Application	Abreviews	Notes
IHC		Use a concentration of 10 µg/ml.
WB	★★★★☆ (2)	1/1 - 1/1000. Predicted molecular weight: 25 kDa.

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

Images

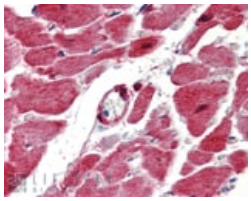


Western blot - Anti-Hsp27 antibody (ab12351)

All lanes : Anti-Hsp27 antibody (ab12351) at 1 µg/ml

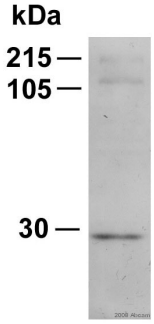
Lane 1 : MW Marker
Lane 2 : HSP27 Recombinant Human Protein
Lane 3 : HSP25 Recombinant Murine Protein (Negative Control)
Lane 4 : HeLa cell lysate
Lane 5 : HeLa cell lysate, Heat Shocked
Lane 6 : Vero, Heat Shocked
Lane 7 : 3T3 cell lysate, heat shocked
Lane 8 : PC-12 cell lysate, Heat Shocked

Predicted band size: 25 kDa



Immunohistochemistry - Anti-Hsp27 antibody (ab12351)

Immunohistochemical analysis of human heart tissue sections with ab12351 at 10 µg/mL.



Western blot - Anti-Hsp27 antibody (ab12351)
This image is courtesy of an anonymous Abreview

Anti-Hsp27 antibody (ab12351) at 1/500 dilution + Rat keratinocytes, whole cell lysate at 10 µg

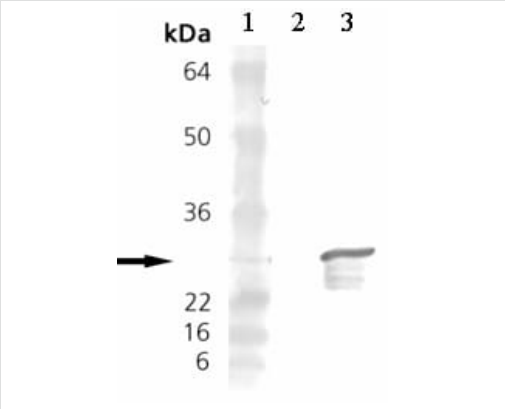
Secondary
HRP conjugated goat anti-rabbit antibody

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 25 kDa
Observed band size: 25 kDa
Additional bands at: 120 kDa (possible non-specific binding), 215 kDa (possible non-specific binding)

Exposure time: 5 minutes



Western blot - Anti-Hsp27 antibody (ab12351)

All lanes : Anti-Hsp27 antibody (ab12351) at 1/1000 dilution

Lane 1 : Molecular weight marker

Lane 2 : Cell lysates prepared from untreated PC-12 cells

Lane 3 : Cell lysates prepared from heat shock treated PC-12 cells

Predicted band size: 25 kDa

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