

Mouse monoclonal antibody to Heat Shock Protein 27 (HSP27) [6H11]: IgG

Catalogue No.:	M-1692-100
Description:	The heat shock proteins were discovered, as the name suggests, since they are heavily upregulated when cells are stressed by temperatures above the normal physiological range. They are expressed in unstressed cells also and have a normal function as chaperones, helping other proteins to fold correctly, and are required in much greater amounts if the cell or tissue is stressed by heat. The increased levels are generated transcriptionally under the influence of a powerful transcription factor, the heat shock factor 1 (HSF1). The different heat shock proteins were originally named based on their SDS-PAGE mobility, so HSP27 has an apparent molecular weight of 27kDa. It is an abundant protein even under non-stress conditions and frequently shows up as a major spot on 2 dimensional gels of cells or tissues. It is known to associate with a variety of other proteins such as actin, intermediate filament subunits and ubiquitin and is found both in the cytoplasm and the nucleus of cells. HSP27 can become heavily phosphorylated under the influence of multiple protein kinases particularly as a result of activation of the p38/SAPK pathway. Upregulation of this protein is protective against neurodegenerative diseases at least in certain mouse models (1). Point mutations in the HSP27 gene are associated with two neurological diseases, Charcot-Marie-Tooth disease type 2F and distal hereditary motor neuropathy IIB (2). These diseases are associated with axonal loss apparently following defects in the transport of neurofilaments.
Unit size:	100 ug
Antigen:	HSP27
Isotype:	IgG1
Clone:	6H11
Produced in:	Mouse
Purity:	IgG
Applications:	Western Blotting (WB) and Immunocytochemistry (IC). A dilution of 1:5,000 - 1:10,000 is recommended for WB. A dilution of 1:500 - 1:1,000 is recommended for IC. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
Specificity:	The antibody reacts with a 27 kDa band by Western blot on a crude extract from HeLa cells. It has also been used successfully for immunocytochemistry.
Species Against:	Human.
Antibody Against:	Heat Shock Protein 27 (HSP27)
Cross-reactivity:	Does not react with rodent protein.
Form:	Lyophilised with 5% trehalose
Reconstitution:	Reconstitute in sterile distilled water. Centrifuge to remove any insoluble material.
Storage:	After reconstitution of lyophilised antibody, aliquot and store at -20C for a higher stability. Avoid freeze-thaw cycles.
Expiry Date:	12 months after purchase

FOR RESEARCH USE ONLY

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- General References:**
1. Wyttenbach, A et al. Heat shock protein 27 prevents cellular polyglutamine toxicity and suppresses the increase of reactive oxygen species caused by huntingtin. *Hum. Molec. Genet.* 11:1137-1151 (2002).
 2. Evgrafov, OV et al. Mutant small heat-shock protein 27 causes axonal Charcot-Marie-Tooth disease and distal hereditary motor neuropathy. *Nature Genet.* 36:602-606 (2004).



Crude extract of HeLa cells. The antibody recognizes the 27 kDa protein.

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