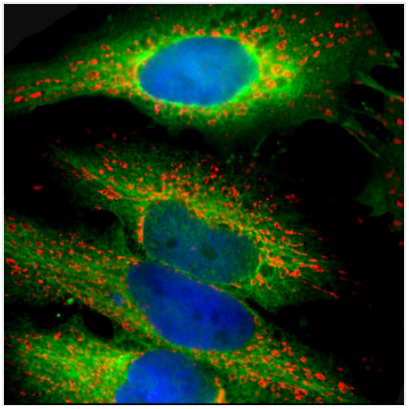
HSP27/HSBP1 Antibody – Chicken Polyclonal

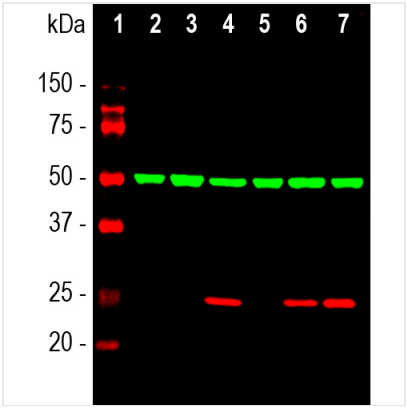
PRODUCT OVERVIEW

Product Name	HSP27/HSBP1, Polyclonal Antibody
Full Product Name	HSP27/HSBP1
Product Gene Name	anti-HSP27/HSBP1 antibody
Clonality	Polyclonal
Isotype	Chicken IgY
Host	Chicken
Species Reactivity	Human
Form/Format	Liquid. Supplied as an aliquot of IgYpreparation plus 5mM NaN3
Preparation and Storage	The antibody can be stored at 2 degree - 8 degree C for 12 months without detectable loss of activity. Avoidrepeated freeze-thaw cycles.
Molecular Weight	8,544 Da
OMIM	604553
3D Structure	ModBase 3D Structure for O75506
Immunogen	Recombinant full length human HSP27 expressed in and purified from E coli
Applications Tested/Suitable for anti-HSP27/HSBP1 antibody	Immunocytochemistry (ICC), Western Blot (WB), Immunohistochemistry (IHC), Immunofluorescence (IF)
Application Notes for anti-HSP27/HSBP1 antibody	IF: 1:1,000 IHC: 1:1,000 WB: 1:2,000-5,000
Related Product Information for anti-HSP27/HSBP1 antibody	The heat shock proteins were discovered 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, but are required in much greater amounts if the cell or tissue is stressed by heat. Heat shock protein 27 (HSP27) is an abundant protein which functions as a chaperone but has many other functions. Upregulation of this protein is protective against neurodegenerative diseases at least in certain mouse models. Point mutations in the HSP27 gene are associated with two neurological diseases, Charcot-Marie-Tooth disease type 2F and distal hereditary motor neuropathy IIB. These diseases are associated with axonal loss apparently following defects in the transport of neurofilaments. HSP27 may bind cytoplamsic cytochrome c released from mitochondria which would otherwise normally activate the caspase apoptotic cascade. HSP27 is a major phosphoprotein of cells primarily under the influence of the p38/SAP kinase and JNK pathways. The central region of the HSP27 molecule corresponds to a crystallin domain, a compact module found in many chaperones and heat shock proteins. HSP27 is implicated in several other aspects of cell signaling and response to cancer and other diseases. The amino acid sequence of HSP27 is relatively poorly conserved across species boundaries, so there are 159 amino acids identities between human, cow, rat and mouse HSP27, out of 204-209 amino acids. This variability results in some antibodies being species specific while others work across many species. CH22133 was made against full length recombinant HSP27 expressed in and purified from E coli. This antibody binds to an epitope on the human molecule missing from the rat and mouse homologue, likely variable peptides in the N and C terminal of human HSP27.
Other Notes	Small volumes of anti-HSP27/HSBP1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for HSP27/HSBP1 purchase	MBS556575 is an antibody targeting HSP27/HSBP1. Reactive in Human. Host: Chicken.



Immunofluorescence (IF) of anti-HSP27/HSBP1 antibody
Immunofluorescent analysis of HeLa cells stained with chicken pAb to HSP27, MBS556575, dilution 1:1,000 in green, and costained with mouse mAb to HSP60 in red. Blue is DAPI staining of nuclear DNA. The CPCA-HSP27 antibody produces strong cytoplasmic staining, while the HSP60 antibody specifically labels mitochondria.



Western Blot (WB) of anti-HSP27/HSBP1 antibody
Western blot analysis of whole cell lysates using chicken pAb to HSP27, MBS556575, dilution 1:2,000, in red. [1] protein standard (red), [2] NIH-3T3, [3] C6, [4] HeLa, [5] HEK293, [6] SH-SY5Y, and [7] COS-1 cells. Strong single band at 27kDa corresponds to the HSP27 protein strongly expressed in human cell lines.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HSP27/HSBP1. It may not necessarily be applicable to this product.

NCBI GI #	4557647
NCBI GeneID	3281
NCBI Accession #	NP_001528.1
UniProt Primary Accession #	O75506
UniProt Secondary Accession #	Q53XA8; Q7Z5Z3
UniProt Related Accession #	O75506
GenBank Nucleotide #	NM_001537.3
NCBI Official Full Name	heat shock factor-binding protein 1
NCBI Official Synonym Full Names	heat shock factor binding protein 1
NCBI Official Symbol	HSBP1
NCBI Official Synonym Symbols	NPC-A-13
UniProt Protein Name	Heat shock factor-binding protein 1
UniProt Synonym Protein Names	Nasopharyngeal carcinoma-associated antigen 13; NPC-A-13
UniProt Gene Name	HSBP1
UniProt Synonym Gene Names	HSF1BP; NPC-A-13
UniProt Entry Name	HSBP1_HUMAN
NCBI Protein Information	heat shock factor-binding protein 1; nasopharyngeal carcinoma-associated antigen 13

NCBI Summary for HSP27/HSBP1	The heat-shock response is elicited by exposure of cells to thermal and chemical stress and through the activation of HSFs (heat shock factors) results in the elevated expression of heat-shock induced genes. Heat shock factor binding protein 1 (HSBP1), is a 76-amino-acid protein that binds to heat shock factor 1(HSF1), which is a transcription factor involved in the HS response. During HS response, HSF1 undergoes conformational transition from an inert non-DNA-binding monomer to active functional trimers. HSBP1 is nuclear-localized and interacts with the active trimeric state of HSF1 to negatively regulate HSF1 DNA-binding activity. Overexpression of HSBP1 in mammalian cells represses the transactivation activity of HSF1. When overexpressed in C.elegans HSBP1 has severe effects on survival of the animals after thermal and chemical stress consistent with a role of HSBP1 as a negative regulator of heat shock response. [provided by RefSeq, Jul 2008]
UniProt Comments for HSP27/HSBP1	HSBP1: Negative regulator of the heat shock response. Negatively affects HSF1 DNA-binding activity. May have a role in the suppression of the activation of the stress response during the aging process. Belongs to the HSBP1 family. Chromosomal Location of Human Ortholog: 16q23.3 Cellular Component: nucleoplasm; cytoskeleton; nucleus Molecular Function: transcription corepressor activity Biological Process: muscle contraction; negative regulation of transcription from RNA polymerase II promoter
Research Articles on HSP27/HSBP1	**1.** HspBP1 inhibited the cytotoxic activity of the Tag7-Hsp70 complex secreted by lymphocytes. HspBP1
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