

KD-Validated Anti-Phospho-HSF1 (Ser303/Ser307) Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1890**Specification****KD-Validated Anti-Phospho-HSF1 (Ser303/Ser307) Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	Q00613
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 57 kDa, observed, 73 kDa kDa
Gene Name	HSF1
Aliases	HSF1; Heat Shock Transcription Factor 1; HSTF1; Heat Shock Factor Protein 1; HSTF; HSF
Immunogen	A synthesized peptide derived from human Phospho-HSF1 (Ser303/Ser307)

KD-Validated Anti-Phospho-HSF1 (Ser303/Ser307) Rabbit Monoclonal Antibody - Additional Information

Gene ID	3297
Other Names	
Heat shock factor protein 1, HSF 1, Heat shock transcription factor 1 {ECO:0000312 HGNC:HGNC:5224}, HSTF 1, HSF1 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=5224 target="_blank">HGNC:5224), HSTF1	

KD-Validated Anti-Phospho-HSF1 (Ser303/Ser307) Rabbit Monoclonal Antibody - Protein Information**Name** HSF1 ([HGNC:5224](#))**Synonyms** HSTF1**Function**

Functions as a stress-inducible and DNA-binding transcription factor that plays a central role in the transcriptional activation of the heat shock response (HSR), leading to the expression of a large class of molecular chaperones, heat shock proteins (HSPs), that protect cells from cellular insult damage (PubMed:[11447121](http://www.uniprot.org/citations/11447121), PubMed:[12659875](http://www.uniprot.org/citations/12659875), PubMed:[12917326](http://www.uniprot.org/citations/12917326), PubMed:[15016915](http://www.uniprot.org/citations/15016915), PubMed:[18451878](http://www.uniprot.org/citations/18451878), PubMed:[1871105](http://www.uniprot.org/citations/1871105), PubMed:[1986252](http://www.uniprot.org/citations/1986252))

[target="_blank">1986252](#), PubMed: [, PubMed: \[, PubMed: \\[, PubMed: \\\[, PubMed: \\\\[, PubMed: \\\\\[, PubMed: \\\\\\[, PubMed: \\\\\\\[, PubMed: \\\\\\\\[, PubMed: \\\\\\\\\[, PubMed: \\\\\\\\\\[\\\\\\\\\\\). In unstressed cells, is present in a HSP90-containing multichaperone complex that maintains it in a non-DNA-binding inactivated monomeric form \\\\\\\\\\\(PubMed: \\\\\\\\\\\[, PubMed: \\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\[\\\\\\\\\\\\\\). Upon exposure to heat and other stress stimuli, undergoes homotrimerization and activates HSP gene transcription through binding to site-specific heat shock elements \\\\\\\\\\\\\\(HSEs\\\\\\\\\\\\\\) present in the promoter regions of HSP genes \\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Upon heat shock stress, forms a chromatin-associated complex with TTC5/STRAP and p300/EP300 to stimulate HSR transcription, therefore increasing cell survival \\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Activation is reversible, and during the attenuation and recovery phase period of the HSR, returns to its unactivated form \\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Binds to inverted 5'-NGAAN-3' pentamer DNA sequences \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[, PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Binds to chromatin at heat shock gene promoters \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Activates transcription of transcription factor FOXR1 which in turn activates transcription of the heat shock chaperones HSPA1A and HSPA6 and the antioxidant NADPH-dependent reductase DHRS2 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Also serves several other functions independently of its transcriptional activity. Involved in the repression of Ras-induced transcriptional activation of the c-fos gene in heat-stressed cells \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Positively regulates pre-mRNA 3'-end processing and polyadenylation of HSP70 mRNA upon heat-stressed cells in a symplekin \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(SYMPK\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)-dependent manner \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Plays a role in nuclear export of stress- induced HSP70 mRNA \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Plays a role in the regulation of mitotic progression \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Also plays a role as a negative regulator of non-homologous end joining \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(NHEJ\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\) repair activity in a DNA\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/18794143\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/17897941\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/14707147\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/9341107\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/34723967\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/25963659\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/26727489\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/1986252\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/16278218\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/11583998\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/18451878\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/9727490\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/9499401\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/8940068\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/8455624\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/7935471\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/7623826\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/26754925\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/25963659\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/1986252\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/1871105\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/16278218\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/12659875\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/11583998\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\]\\\\\\\\\\\\\\(http://www.uniprot.org/citations/10359787\\\\\\\\\\\\\\)\\\\\\\\\\\\\]\\\\\\\\\\\\\(http://www.uniprot.org/citations/9727490\\\\\\\\\\\\\)\\\\\\\\\\\\]\\\\\\\\\\\\(http://www.uniprot.org/citations/16278218\\\\\\\\\\\\)\\\\\\\\\\\]\\\\\\\\\\\(http://www.uniprot.org/citations/11583998\\\\\\\\\\\)\\\\\\\\\\]\\\\\\\\\\(http://www.uniprot.org/citations/9727490\\\\\\\\\\)\\\\\\\\\]\\\\\\\\\(http://www.uniprot.org/citations/9535852\\\\\\\\\)\\\\\\\\]\\\\\\\\(http://www.uniprot.org/citations/9499401\\\\\\\\)\\\\\\\]\\\\\\\(http://www.uniprot.org/citations/9341107\\\\\\\)\\\\\\]\\\\\\(http://www.uniprot.org/citations/9121459\\\\\\)\\\\\]\\\\\(http://www.uniprot.org/citations/8946918\\\\\)\\\\]\\\\(http://www.uniprot.org/citations/8940068\\\\)\\\]\\\(http://www.uniprot.org/citations/7760831\\\)\\]\\(http://www.uniprot.org/citations/7623826\\)\]\(http://www.uniprot.org/citations/26754925\)](http://www.uniprot.org/citations/25963659)

damage-dependent manner (PubMed:26359349). Involved in stress-induced cancer cell proliferation in a IER5-dependent manner (PubMed:26754925).

Cellular Location

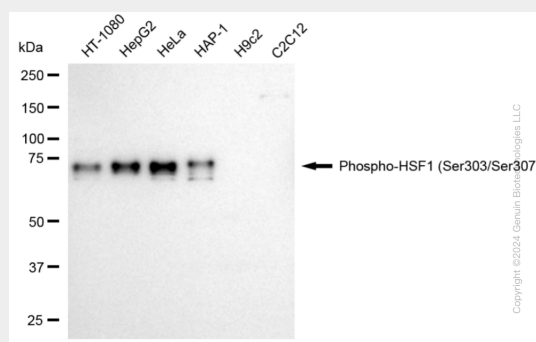
Nucleus. Cytoplasm. Nucleus, nucleoplasm. Cytoplasm, perinuclear region. Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Chromosome, centromere, kinetochore Note=The monomeric form is cytoplasmic in unstressed cells (PubMed:26159920, PubMed:8455624). Predominantly nuclear protein in both unstressed and heat shocked cells (PubMed:10359787, PubMed:10413683). Translocates in the nucleus upon heat shock (PubMed:8455624). Nucleocytoplasmic shuttling protein (PubMed:26159920). Colocalizes with IER5 in the nucleus (PubMed:27354066). Colocalizes with BAG3 to the nucleus upon heat stress (PubMed:26159920, PubMed:8455624). Localizes in subnuclear granules called nuclear stress bodies (nSBs) upon heat shock (PubMed:10359787, PubMed:10747973, PubMed:11447121, PubMed:11514557, PubMed:19229036, PubMed:24581496, PubMed:25963659). Colocalizes with SYMPK and SUMO1 in nSBs upon heat shock (PubMed:10359787, PubMed:11447121, PubMed:11514557, PubMed:12665592, PubMed:14707147) Colocalizes with PRKACA/PKA in the nucleus and nSBs upon heat shock (PubMed:21085490). Relocalizes from the nucleus to the cytoplasm during the attenuation and recovery phase period of the heat shock response (PubMed:26159920). Translocates in the cytoplasm in a YWHAE- and XPO1/CRM1-dependent manner (PubMed:12917326). Together with histone H2AX, redistributed in discrete nuclear DNA damage-induced foci after ionizing radiation (IR) (PubMed:26359349). Colocalizes with calcium-responsive transactivator SS18L1 at kinetochore region on the mitotic chromosomes (PubMed:18794143). Colocalizes with gamma tubulin at centrosome (PubMed:18794143). Localizes at spindle pole in metaphase (PubMed:18794143). Colocalizes with PLK1 at spindle poles during prometaphase (PubMed:18794143).

KD-Validated Anti-Phospho-HSF1 (Ser303/Ser307) Rabbit Monoclonal Antibody - Protocols

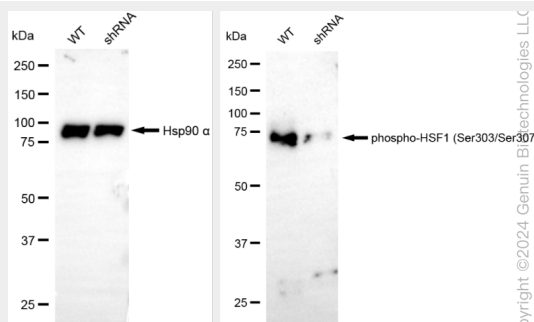
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

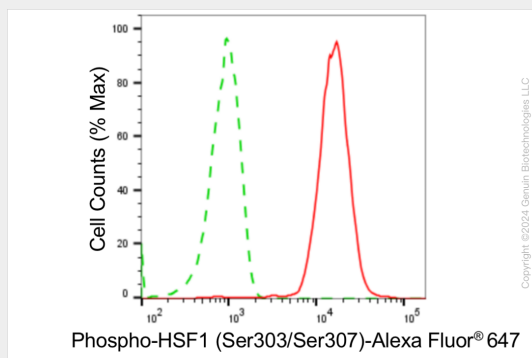
KD-Validated Anti-Phospho-HSF1 (Ser303/Ser307) Rabbit Monoclonal Antibody - Images



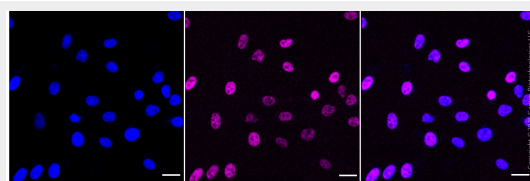
Western blotting analysis using anti-phospho-HSF1 (Ser303/Ser307) antibody (Cat#AGI1890). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-phospho-HSF1 (Ser303/Ser307) antibody (Cat#AGI1890, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-phospho-HSF1 (Ser303/Ser307) antibody (Cat#AGI1890). Phospho-HSF1 (Ser303/Ser307) expression in wild type (WT) and HSF1 shRNA knockdown (KD) 293T cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-phospho-HSF1 (Ser303/Ser307) antibody (Cat#AGI1890, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Phospho-HSF1 (Ser303/Ser307) expression in HepG2 cells using anti-Phospho-HSF1 (Ser303/Ser307) antibody (Cat#AGI1890, 1:2,000). Green, isotype control; red, Phospho-HSF1 (Ser303/Ser307).



Immunocytochemical staining of HepG2 cells with anti-phospho-HSF1 (Ser303/Ser307) antibody (Cat#AGI1890, 1:1,000). Nuclei were stained blue with DAPI; Phospho-HSF1 (Ser303/Ser307) was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.