

KD Validated Anti-Phospho-HSF1 (S326) Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1119**Specification****KD Validated Anti-Phospho-HSF1 (S326) Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	Q00613
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 57 kDa, observed, 82 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 (S326)

KD Validated Anti-Phospho-HSF1 (S326) 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)>HGNC:5224), HSTF1	

KD Validated Anti-Phospho-HSF1 (S326) 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, PubMed:12659875, PubMed:12917326, PubMed:15016915, PubMed:18451878, PubMed:1871105, PubMed:1986252)

[target="_blank">1986252](#), PubMed: [target="_blank">25963659](http://www.uniprot.org/citations/25963659), PubMed: [target="_blank">26754925](http://www.uniprot.org/citations/26754925), PubMed: [target="_blank">7623826](http://www.uniprot.org/citations/7623826), PubMed: [target="_blank">7760831](http://www.uniprot.org/citations/7760831), PubMed: [target="_blank">8940068](http://www.uniprot.org/citations/8940068), PubMed: [target="_blank">9121459](http://www.uniprot.org/citations/9121459), PubMed: [target="_blank">9341107](http://www.uniprot.org/citations/9341107), PubMed: [target="_blank">9499401](http://www.uniprot.org/citations/9499401), PubMed: [target="_blank">9535852](http://www.uniprot.org/citations/9535852), PubMed: [target="_blank">9727490](http://www.uniprot.org/citations/9727490)). In unstressed cells, is present in a HSP90-containing multichaperone complex that maintains it in a non-DNA-binding inactivated monomeric form (PubMed: [target="_blank">11583998](http://www.uniprot.org/citations/11583998), PubMed: [target="_blank">16278218](http://www.uniprot.org/citations/16278218), PubMed: [target="_blank">9727490](http://www.uniprot.org/citations/9727490)). 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: [target="_blank">10359787](http://www.uniprot.org/citations/10359787), PubMed: [target="_blank">11583998](http://www.uniprot.org/citations/11583998), PubMed: [target="_blank">12659875](http://www.uniprot.org/citations/12659875), PubMed: [target="_blank">16278218](http://www.uniprot.org/citations/16278218), PubMed: [target="_blank">1871105](http://www.uniprot.org/citations/1871105), PubMed: [target="_blank">1986252](http://www.uniprot.org/citations/1986252), PubMed: [target="_blank">25963659](http://www.uniprot.org/citations/25963659), PubMed: [target="_blank">26754925](http://www.uniprot.org/citations/26754925), PubMed: [target="_blank">7623826](http://www.uniprot.org/citations/7623826), PubMed: [target="_blank">7935471](http://www.uniprot.org/citations/7935471), PubMed: [target="_blank">8455624](http://www.uniprot.org/citations/8455624), PubMed: [target="_blank">8940068](http://www.uniprot.org/citations/8940068), PubMed: [target="_blank">9499401](http://www.uniprot.org/citations/9499401), PubMed: [target="_blank">9727490](http://www.uniprot.org/citations/9727490)). Upon heat shock stress, forms a chromatin-associated complex with TTC5/STRAP and p300/EP300 to stimulate HSR transcription, therefore increasing cell survival (PubMed: [target="_blank">18451878](http://www.uniprot.org/citations/18451878)). Activation is reversible, and during the attenuation and recovery phase period of the HSR, returns to its unactivated form (PubMed: [target="_blank">11583998](http://www.uniprot.org/citations/11583998), PubMed: [target="_blank">16278218](http://www.uniprot.org/citations/16278218)). Binds to inverted 5'-NGAAN-3' pentamer DNA sequences (PubMed: [target="_blank">1986252](http://www.uniprot.org/citations/1986252), PubMed: [target="_blank">26727489](http://www.uniprot.org/citations/26727489)). Binds to chromatin at heat shock gene promoters (PubMed: [target="_blank">25963659](http://www.uniprot.org/citations/25963659)). 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: [target="_blank">34723967](http://www.uniprot.org/citations/34723967)). 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: [target="_blank">9341107](http://www.uniprot.org/citations/9341107)). Positively regulates pre-mRNA 3'-end processing and polyadenylation of HSP70 mRNA upon heat-stressed cells in a symplekin (SYMPK)-dependent manner (PubMed: [target="_blank">14707147](http://www.uniprot.org/citations/14707147)). Plays a role in nuclear export of stress- induced HSP70 mRNA (PubMed: [target="_blank">17897941](http://www.uniprot.org/citations/17897941)). Plays a role in the regulation of mitotic progression (PubMed: [target="_blank">18794143](http://www.uniprot.org/citations/18794143)). Also plays a role as a negative regulator of non-homologous end joining (NHEJ) repair activity in a DNA

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

Cellular Location

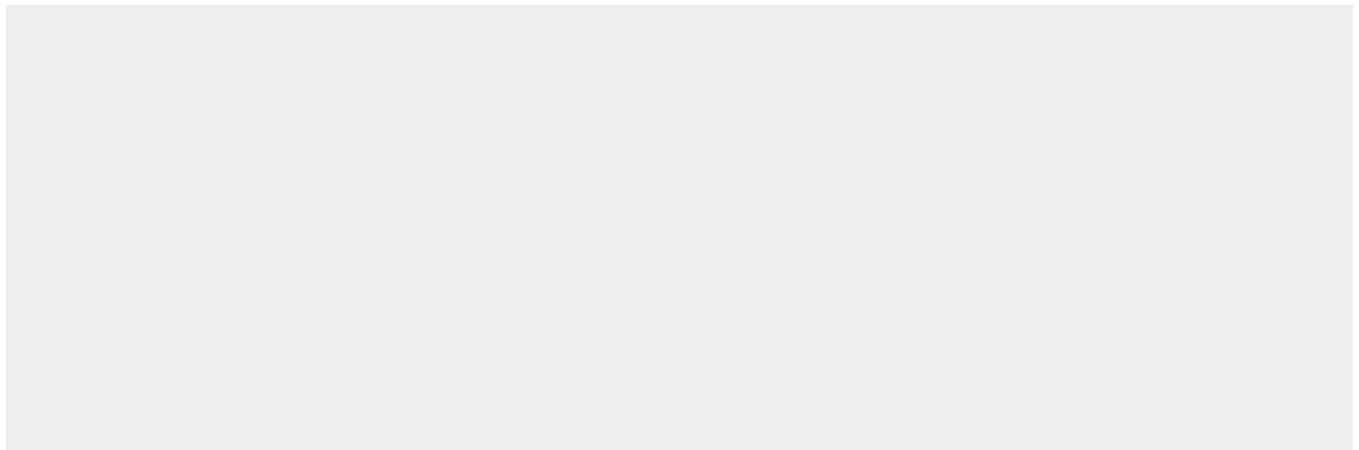
Nucleus. Cytoplasm. Nucleus, nucleoplasm. Cytoplasm, perinuclear region. Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Chromosome, centromere, kinetochore Note=The monomeric form is cytoplasmic in unstressed cells (PubMed:26159920, PubMed:8455624). 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).

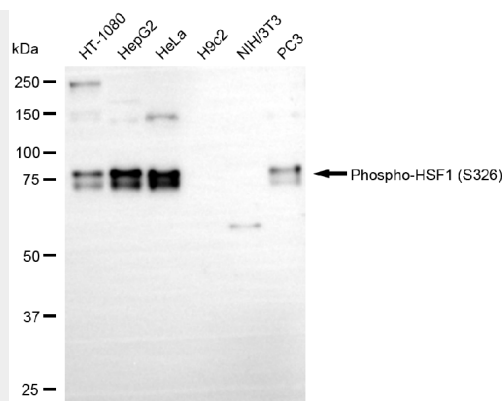
KD Validated Anti-Phospho-HSF1 (S326) Rabbit Monoclonal Antibody - Protocols

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](#)

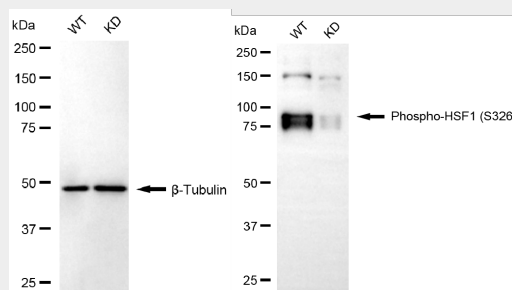
KD Validated Anti-Phospho-HSF1 (S326) Rabbit Monoclonal Antibody - Images





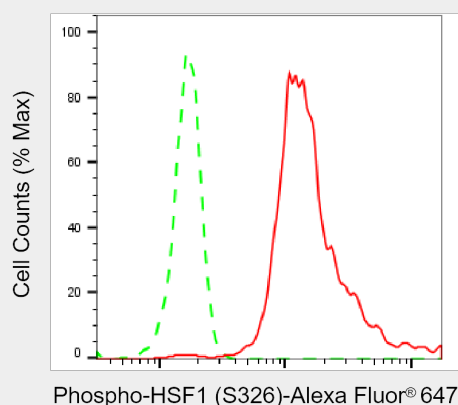
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Western blotting analysis using anti-Phospho-HSF1 (S326) antibody (Cat#AGI1119). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Phospho-HSF1 (S326) antibody (Cat#AGI1119, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



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Western blotting analysis using anti-phospho-HSF1 (S326) antibody (Cat#AGI1119). Phospho-HSF1 (S326) expression in wild type (WT) and HSF1 knockdown (KD) HSHC cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-phospho-HSF1 (S326) antibody (Cat#AGI1119, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



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Flow cytometric analysis of Phospho-HSF1 (S326) expression in HeLa cells using Phospho-HSF1 (S326) antibody (Cat#AGI1119, 1:2,000). Green, isotype control; red, Phospho-HSF1 (S326).