



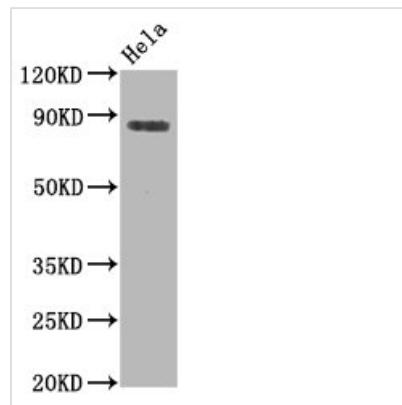
Phospho-HSF1 (S326) Antibody

Product Code	CSB-RA010791A326phHU
Abbreviation	Heat shock factor protein 1
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q00613
Immunogen	A synthesized peptide derived from Human Phospho-HSF1 (S326)
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	<p>Function 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 insults' damage (PubMed:1871105, PubMed:11447121, PubMed:1986252, PubMed:7760831, PubMed:7623826, PubMed:8946918, PubMed:8940068, PubMed:9341107, PubMed:9121459, PubMed:9727490, PubMed:9499401, PubMed:9535852, PubMed:12659875, PubMed:12917326, PubMed:15016915, PubMed:25963659, PubMed:26754925). In unstressed cells, is present in a HSP90-containing multichaperone complex that maintains it in a non-DNA-binding inactivated monomeric form (PubMed:9727490, PubMed:11583998, PubMed:16278218). 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:1871105, PubMed:1986252, PubMed:8455624, PubMed:7935471, PubMed:7623826, PubMed:8940068, PubMed:9727490, PubMed:9499401, PubMed:10359787, PubMed:11583998, PubMed:12659875, PubMed:16278218, PubMed:25963659, PubMed:26754925). Activation is reversible, and during the attenuation and recovery phase period of the HSR, returns to its unactivated form (PubMed:11583998, PubMed:16278218). Binds to inverted 5'-NGAAN-3' pentamer DNA sequences (PubMed:1986252, PubMed:26727489). Binds to chromatin at heat shock gene promoters (PubMed:25963659). Plays also 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:9341107). Positively regulates pre-mRNA 3'-end processing and polyadenylation of HSP70 mRNA upon heat-stressed cells in a symplekin (SYMPK)-dependent manner (PubMed:14707147). Plays a role in nuclear export of stress-induced HSP70 mRNA (PubMed:17897941). Plays a role in the regulation of mitotic progression (PubMed:18794143). Plays also 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).</p>
Form	Liquid
Conjugate	Non-conjugated



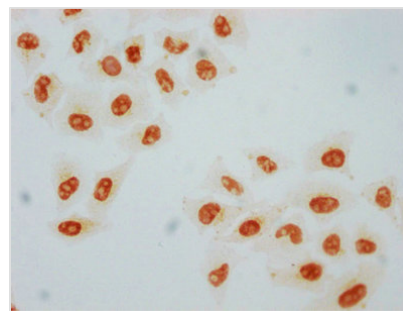
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Heat shock factor protein 1, HSF 1, Heat shock transcription factor 1, HSF1
Immunogen Species	Homo sapiens (Human)
Research Area	Tags & Cell Markers
Gene Names	HSF1
Accession NO.	2A7

Image



Western Blot

Positive WB detected in HeLa whole cell lysate
 All lanes Phospho-HSF1 antibody at 0.8µg/ml
 Secondary
 Goat polyclonal to rabbit IgG at 1/50000 dilution
 Predicted band size: 82 KDa
 Observed band size: 82 KDa



Immunocytochemistry analysis of CSB-RA010791A326pHU diluted at 1:80 and staining in HeLa cells performed on a Leica Bond™ system. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.

Description

Phospho-HSF1 (S326) antibody CSB-RA010791A326pHU is a recombinant monoclonal antibody belonging to rabbit IgG. Its production procedures include: the acquisition of the phospho-HSF1 (S326) monoclonal antibody using the phosphopeptide corresponding to human EIF2S1 (phospho S326) immunizes animals; the determination of DNA sequence of the phospho-HSF1 (S326) monoclonal antibody; the clone of the DNA sequence into the plasmid and subsequent transfection into cell lines for expression. This phospho-HSF1 (S326) antibody underwent purification using affinity chromatography. It has been tested in multiple applications, including ELISA, WB, and IHC. It specifically targets the human HSF1 phosphorylated at Ser 326 residue.



HSF1 orchestrates a complex transcriptional mechanism that aids adaptability and survival in stressful situations. It keeps track of the structural integrity of the proteome. Stresses such as thermal shock, hypoxia, heavy metals, reactive oxygen species, and pH shifts stimulate the activation of HSF1. HSF1 is involved in the initiation of tumors as well as the promotion and maintenance of cancer cell proliferation. Phosphorylation of S326 by AKT1, mTOR, p38, and MEK1 is a key regulator of HSF1 transcriptional activity.