

HSF1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP14189a**Specification**

HSF1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q00613](#)**HSF1 Antibody (N-term) Blocking Peptide - Additional Information**

Gene ID 3297

Other Names

Heat shock factor protein 1, HSF 1, Heat shock transcription factor 1, HSTF 1, HSF1, HSTF1

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

HSF1 Antibody (N-term) Blocking Peptide - Protein InformationName HSF1 ([HGNC:5224](#))

Synonyms HSTF1

FunctionFunctions 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: [1871105](http://www.uniprot.org/citations/1871105);[11447121](http://www.uniprot.org/citations/11447121);[1986252](http://www.uniprot.org/citations/1986252);[7760831](http://www.uniprot.org/citations/7760831);[7623826](http://www.uniprot.org/citations/7623826);[8946918](http://www.uniprot.org/citations/8946918);[8940068](http://www.uniprot.org/citations/8940068);[9341107](http://www.uniprot.org/citations/9341107);[9121459](http://www.uniprot.org/citations/9121459);[9727490](http://www.uniprot.org/citations/9727490);[9499401](http://www.uniprot.org/citations/9499401);[9535852](http://www.uniprot.org/citations/9535852);[12659875](http://www.uniprot.org/citations/12659875))

[target="_blank">12659875](#), 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 damage-dependent manner \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\). Involved in stress-induced cancer cell proliferation in a IER5-dependent manner \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(PubMed: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\[\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\).\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/26754925\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/26359349\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\(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/26754925\\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\\(http://www.uniprot.org/citations/25963659\\\\\\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\\\\\\]\\\\\\\\\\\\\\\\\\\(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/9499401\\\\\\\\\\\\\\\)\\\\\\\\\\\\\\]\\\\\\\\\\\\\\(http://www.uniprot.org/citations/9727490\\\\\\\\\\\\\\)\\\\\\\\\\\\\]\\\\\\\\\\\\\(http://www.uniprot.org/citations/8940068\\\\\\\\\\\\\)\\\\\\\\\\\\]\\\\\\\\\\\\(http://www.uniprot.org/citations/7623826\\\\\\\\\\\\)\\\\\\\\\\\]\\\\\\\\\\\(http://www.uniprot.org/citations/7935471\\\\\\\\\\\)\\\\\\\\\\]\\\\\\\\\\(http://www.uniprot.org/citations/8455624\\\\\\\\\\)\\\\\\\\\]\\\\\\\\\(http://www.uniprot.org/citations/1986252\\\\\\\\\)\\\\\\\\]\\\\\\\\(http://www.uniprot.org/citations/1871105\\\\\\\\)\\\\\\\]\\\\\\\(http://www.uniprot.org/citations/16278218\\\\\\\)\\\\\\]\\\\\\(http://www.uniprot.org/citations/11583998\\\\\\)\\\\\]\\\\\(http://www.uniprot.org/citations/9727490\\\\\)\\\\]\\\\(http://www.uniprot.org/citations/18451878\\\\)\\\]\\\(http://www.uniprot.org/citations/26754925\\\)\\]\\(http://www.uniprot.org/citations/25963659\\)\]\(http://www.uniprot.org/citations/15016915\)](http://www.uniprot.org/citations/12917326)

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:8455624, PubMed:26159920). Predominantly nuclear protein in both unstressed and heat shocked cells (PubMed:10413683, PubMed:10359787). 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:8455624, PubMed:26159920). Localizes in subnuclear granules called nuclear stress bodies (nSBs) upon heat shock (PubMed:11447121, PubMed:11514557, PubMed:10359787, PubMed:25963659, PubMed:10747973, PubMed:24581496, PubMed:19229036). Colocalizes with SYMPK and SUMO1 in nSBs upon heat shock (PubMed:11447121, PubMed:12665592, PubMed:11514557, PubMed:14707147, PubMed:10359787) 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).

HSF1 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

HSF1 Antibody (N-term) Blocking Peptide - Images

HSF1 Antibody (N-term) Blocking Peptide - Background

The product of this gene is a heat-shock transcriptionfactor. Transcription of heat-shock genes is rapidly induced after temperature stress. Hsp90, by itself and/or associated with multichaperone complexes, is a major repressor of this gene.

HSF1 Antibody (N-term) Blocking Peptide - References

Hayashida, N., et al. EMBO J. 29(20):3459-3469(2010)Sangle, G.V., et al. Endocrinology 151(9):4455-4466(2010)Shunmei, E., et al. Mol. Cells 29(5):527-531(2010)Kim, S.A., et al. Int. J. Oncol. 36(4):867-872(2010)Wang, C., et al. J Transl Med 8, 44 (2010) :