Heat Shock Factor 1, HSF1 (HSF1) ELISA Kit for Rat

PRODUCT OVERVIEW

Product Name	Heat Shock Factor 1, HSF1, ELISA Kit
Full Product Name	Rat Heat Shock Factor 1, HSF1 ELISA Kit
Product Gene Name	HSF1 elisa kit
Species Reactivity	Rat
Preparation and Storage	Store at 2 to 8 degree C for 6 months.
Molecular Weight	52,881 Da
3D Structure	ModBase 3D Structure for Q00613
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for HSF1 elisa kit	MBS160340 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Heat Shock Factor 1, HSF1, ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing HSF1. The ELISA analytical biochemical technique of the MBS160340 kit is based on HSF1 antibody-HSF1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect HSF1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, HSF1. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).
Other Notes	Small volumes of HSF1 elisa kit 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HSF1. It may not necessarily be applicable to this product.

NCBI GI #	5031767
NCBI GeneID	3297
NCBI Accession #	NP_005517.1
UniProt Primary Accession #	Q00613
UniProt Secondary Accession #	Q53XT4; A8K4L0; A8MW26
UniProt Related Accession #	Q00613
GenBank Nucleotide #	NM_005526.3
NCBI Official Full Name	heat shock factor protein 1
NCBI Official Synonym Full Names	heat shock transcription factor 1
NCBI Official Symbol	HSF1
NCBI Official Synonym Symbols	HSTF1
UniProt Protein Name	Heat shock factor protein 1
UniProt Synonym Protein Names	Heat shock transcription factor 1
Protein Family	Heat shock factor protein

UniProt Gene Name	HSF1
UniProt Synonym Gene Names	HSTF1; HSTF 1
NCBI Protein Information	heat shock factor protein 1
NCBI Summary for HSF1	The product of this gene is a transcription factor that is rapidly induced after temperature stress and binds heat shock promoter elements (HSE). This protein plays a role in the regulation of lifespan. Expression of this gene is repressed by phosphorylation, which promotes binding by heat shock protein 90. [provided by RefSeq, Jul 2017]
UniProt Comments for HSF1	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).
Research Articles on HSF1	**1.** Overexpressed HSF1 triggers pre-mRNA 3' processing in cancers.
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