

## Product datasheet for **MR208087**

### Hsf1 (NM\_008296) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Hsf1 (NM_008296) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Hsf1
Synonyms:	AA960185; Hsf1alpha; Hsf1beta; HSTF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR208087 representing NM\_008296  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGATCTGGCCGTGGGCCCGGTGCAGCGGGGCCAGCAACGTCCCGGCCTTCTAACCAAGCTGTGGA  
 CCCTCGTGAGCGACCCGGACACAGACGCGCTCATCTGCTGGAGCCGAGTGGGAACAGCTCCACCGTGT  
 TGACCAGGGCCAGTTTGCCAAGGAGGTGCTGCCAAGTACTTCAAGCACACAACATGGCTAGCTTCGTG  
 CGGCAGCTCAACATGTATGGCTCCGAAAAGTAGTCCACATTGAGCAGGGTGGCCTGGTCAAGCCTGAGA  
 GAGATGACACCGAGTTCAGCATCCTTGTCTTCTGCGTGGACAGGAACAGCTCCTTGAGAACATCAAGAG  
 GAAAGTGACCAGCGTGTCCACCCTGAAGAGTGAGGACATAAAAAACGCCAGGACAGTGTACCCCGGCTG  
 TTGACAGATGTGCAGCTGATGAAGGGGAAACAGGAGTGTATGGACTCCAAGCTCCTGGCCATGAAGCAG  
 AGAACGAGGCCCTGTGGCGGGAGGTGGCCAGCCTTCGGCAGAAGCATGCCAGCAGCAAAAAGTTGTCAA  
 CAAGCTCATTAGTTCCTGATCTCACTGGTGCAGTGAACCGGATCCTGGGGTGAAGAGAAAGATCCCT  
 CTGATGTTGAGTGACAGCAACTCAGCACACTCTGTGCCAAGTATGGTGCAGACTACTCCCTGGAGCATG  
 TCCATGGTCTGGCCATACTCAGCTCCATCTCCAGCCTACAGCAGCTCTAGCCTTTACTCCTCTGATGC  
 TGTACCAGCTCTGGACCATAATCTCCGATATCACTGAGCTGGCTCCCACCAGCCCTTTGGCTCCCCA  
 GGCAGGAGCATAGATGAGAGGCCCTGTCCAGCAGCACTCTGGTCCGTGTCAAGCAAGAGCCCCCAGCC  
 CACCTCACAGCCCTCGGGTACTGGAGGGCAGCCCTGGGCGCCCATCTCCATGGATACCCCTTTGTCCCC  
 AACTGCCTTATTGACTCCATCCTTCGAGAGAGCGAGCCTACCCCTGTGCCTCAAACACAGCCCTATG  
 GACACAACCGGAGCCCAAGCCCCGCACTCCCAGCCCCCTCCACCCTGAGAAGTGCCTCAGCGTAGCCT  
 GCCTAGACAAGAACGAGCTAAGTGATCACCTGGATGCCATGGACTCCAACCTGGACAACCTGCAGCAT  
 GCTGACAAGCCACGGCTTCAAGTGTGGACACCAAGTGCCTGCTGGACATTACAGGAGCTTCTGTCTCCACA  
 GAGCCTCCAGGCCTATTGAGGCAGAGAACAGTAACCCCGACTCAGGAAAGCAGCTGGTGCCTACACGG  
 CTCAGCCTCTGTTCTGCTGGATCCTGATGCTGTGGACACAGGGAGCAGTGAAGTGCCTGTCTTTGA  
 GCTGGGGGAGAGCTCCTACTTCTCTGAGGGGATGACTACACGGATGATCCCACCATCTCTCTTCTGACA  
 GGCCTGAACCCATAAAGCCAAGGACCCCACTGTCTCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208087 representing NM\_008296  
 Red=Cloning site Green=Tags(s)

MDLAVGPGAAGPSNVPAFLTKLWTLVSDPDTDALICWSPSGNSFHVFDQGFQFAKEVLPKYFKHNNMASFV  
 RQLNMYGFRKVVHIEQGGLVKPERDDTEFQHPCFLRGQEQLLENIKRKVTSVSTLKSEDIKIRQDSVTRL  
 LTDVQLMKGKQECMDSKLLAMKHENEALWREVASLRQKHAQQQKVVNKLIQFLISLVQSNRILGVKRKIP  
 LMLSDSNSAHSVPKYGRQYSLEHVHGPYPYSPAYSSSLYSSDAVTSVSGPIISDITELAPTSPLASP  
 GRSIDERPLSSSTLVRVKQEPSPPHSPRVLEASPRSSMDTPLSPTAFIDSILRESEPTPAASNTAPM  
 DTTGAQAPALPTPSTPEKCLSVACLKDELSDHLDAMDSNLDNLQTMLTSHGFSVDTSALLDIQELLSPQ  
 EPPRPIEAENSNPDSGKQLVHYTAQPLFLLDPAVDTGSSELPVLFELGESSYFSEGDDYDDPTISLLT  
 GTEPHKAKDPTVS

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_008296

**ORF Size:** 1509 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_008296.3](#)

**RefSeq Size:** 2018 bp

**RefSeq ORF:** 1512 bp

**Locus ID:** 15499

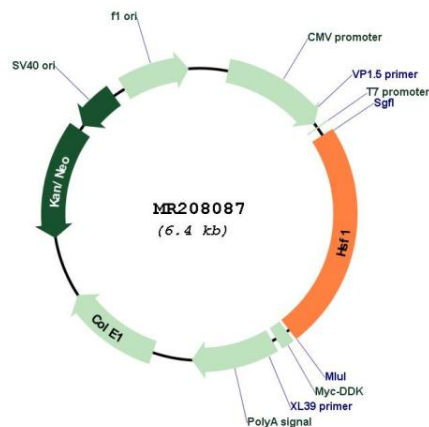
**UniProt ID:** [P38532](#)

**Cytogenetics:** 15 35.95 cM

MW: 55.4 kDa

**Gene Summary:** 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. In unstressed cells, is present in a HSP90-containing multichaperone complex that maintains it in a non-DNA-binding inactivated monomeric form. 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. Activation is reversible, and during the attenuation and recovery phase period of the HSR, returns to its unactivated form. Binds to inverted 5'-NGAAN-3' pentamer DNA sequences. Binds to chromatin at heat shock gene promoters. 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. Positively regulates pre-mRNA 3'-end processing and polyadenylation of HSP70 mRNA upon heat-stressed cells in a symplekin (SYMPK)-dependent manner. Plays a role in nuclear export of stress-induced HSP70 mRNA. Plays a role in the regulation of mitotic progression. Plays also a role as a negative regulator of non-homologous end joining (NHEJ) repair activity in a DNA damage-dependent manner. Involved in stress-induced cancer cell proliferation in a IER5-dependent manner.[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR208087