



Rabbit Anti-phospho-HSF1 (Ser303) antibody

SL5363R

Product Name:	phospho-HSF1 (Ser303)
Chinese Name:	磷酸化热休克因子1抗体
Alias:	HSF1(phospho-Ser303); Heat shock factor 1; Heat shock factor protein 1; Heat shock transcription factor 1; HSF 1; hsf1; HSTF 1; HSTF1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Rabbit,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	57kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human HSF1 around the phosphorylation site of Ser303:PP(p-S)PP
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	The product of this gene is a heat-shock transcription factor. 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. [provided by RefSeq, Jul 2008].

Function:

DNA-binding protein that specifically binds heat shock promoter elements (HSE) and activates transcription. In higher eukaryotes, HSF is unable to bind to the HSE unless the cells are heat shocked.

Subunit:

Monomer. Under normal conditions, interacts with HSP90AA1 in the HSP90 multichaperone complex; the interaction prevents trimerization and activation of HSF1. On activation by heat-stress or by other factors such as metal ions, HSF1 is released from the complex, homotrimerizes, is hyperphosphorylated and translocated to the nucleus where, subsequently, it can activate transcription. Binds the complex through the regulatory domain. Interacts with SYMPK and CSTF2 in heat-stressed cells. Interacts with FKBP4 in the HSP90 multichaperone complex; the interaction is independent of the phosphorylation state of HSF1. Interacts with MAPKAPK2.

Subcellular Location:

Cytoplasm. Nucleus. Note=Cytoplasmic during normal growth. On activation, translocates to nuclear stress granules. Colocalizes with SUMO1 in nuclear stress granules.

Post-translational modifications:

Phosphorylated on multiple serine residues, a subset of which are involved in stress-related regulation of transcription activation. Constitutive phosphorylation represses transcriptional activity at normal temperatures. Levels increase on specific residues heat-shock and enhance HSF1 transactivation activity. Phosphorylation on Ser-307 derepresses activation on heat-stress and in combination with Ser-303 phosphorylation appears to be involved in recovery after heat-stress. Phosphorylated on Ser-230 by CAMK2, in vitro. Cadmium also enhances phosphorylation at this site. Phosphorylation on Ser-303 is a prerequisite for HSF1 sumoylation. Phosphorylation on Ser-121 inhibits transactivation and promotes HSP90 binding. Phosphorylation on Thr-142 also mediates transcriptional activity induced by heat.

Sumoylated with SUMO1 and SUMO2 on heat-shock. Heat-inducible sumoylation occurs after 15 min of heat-shock, after which levels decrease and at 4 hours, levels return to control levels. Sumoylation has no effect on HSE binding nor on transcriptional activity. Phosphorylation on Ser-303 is a prerequisite for sumoylation.

Similarity:

Belongs to the HSF family.

SWISS:

Q00613

Gene ID:

3297

Database links:

[Entrez Gene: 3297](#) Human

[Omin: 140580](#) Human

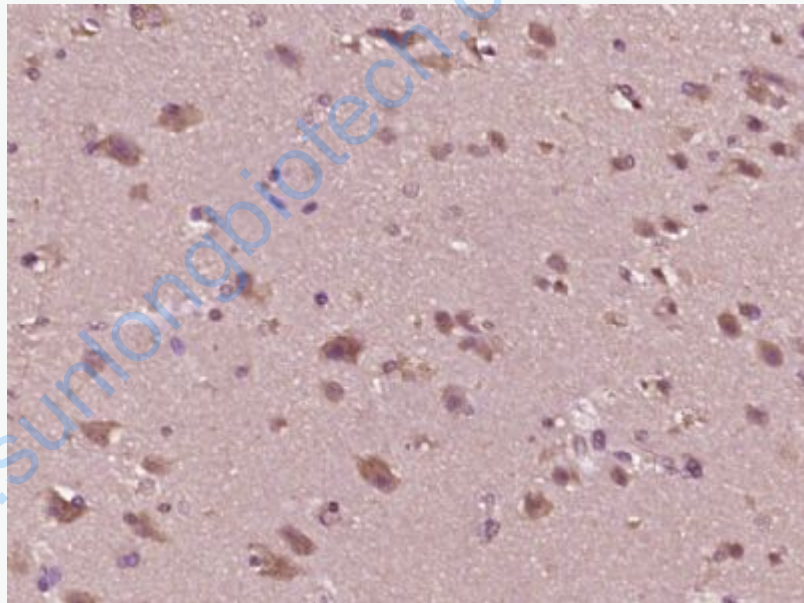
[SwissProt: Q00613](#) Human

[Unigene: 530227](#) Human

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Paraformaldehyde-fixed, paraffin embedded (human brain glioma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (HSF1 (Ser303)) Polyclonal Antibody, Unconjugated (SL5363R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

