

Rabbit HSF1 Sumoylation Site Polyclonal Antibody | anti-HSF1 antibody

HSF1 Sumoylation Site Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA288661	Rabbit	Human, mouse (Predicted Reactivity: Bovine)	Western Blot, ELISA, Immunofluorescence

PRODUCT SYNONYMS

HSF1 Sumoylation Site; Polyclonal Antibody; HSF1 Sumoylation Site Antibody; Heat shock factor protein 1; HSF 1; Heat shock transcription factor 1; HSTF 1; HSF1; HSTF1; anti-HSF1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, mouse (Predicted Reactivity: Bovine)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This HSF1 Sumoylation Site antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 278-309 amino acids from human HSF1 Sumoylation Site.
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Sequence Positions	278-309
Sequence Length	529
Applicable Applications for anti-HSF1 antibody	WB (Western Blot), ELISA, IF (Immunofluorescence)
Function	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 IERS-dependent manner.

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. Predominantly nuclear protein in both unstressed and heat shocked cells. Translocates in the nucleus upon heat shock. Nucleocytoplasmic shuttling protein. Colocalizes with IER5 in the nucleus. Colocalizes with BAG3 to the nucleus upon heat stress. Localizes in subnuclear granules called nuclear stress bodies (nSBs) upon heat shock. Colocalizes with SYMPK and SUMO1 in nSBs upon heat shock. Colocalizes with PRKACA/PKA in the nucleus and nSBs upon heat shock. Relocalizes from the nucleus to the cytoplasm during the attenuation and recovery phase period of the heat shock response. Translocates in the cytoplasm in a YWHAE- and XPO1/CRM1-dependent manner. Together with histone H2AX, redistributed in discrete nuclear DNA damage-induced foci after ionizing radiation (IR). Colocalizes with calcium-responsive transactivator SS18L1 at kinetochore region on the mitotic chromosomes. Colocalizes with gamma tubulin at centrosome. Localizes at spindle pole in metaphase. Colocalizes with PLK1 at spindle poles during prometaphase.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.

IMAGES



IF (Immunofluorescence)

Confocal immunofluorescent analysis of HSF1 Sumoylation Site Antibody with HeLa cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).



WB (Western Blot)

HSF1 Antibody western blot analysis in Jurkat cell line and mouse heart tissue lysates (35ug/lane).This demonstrates the HSF1 antibody detected the HSF1 protein (arrow).

ADDITIONAL INFORMATION

Related Product Information for anti-HSF1 antibody	Heat shock transcription factor 1 (HSF1) mediates the induction of heat shock protein gene expression in cells exposed to elevated temperature and other stress conditions. In response to stress, HSF1 acquires DNA-binding ability and localizes to nuclear stress granules. SUMO modification of HSF1 converts HSF1 to the DNA-binding form. HSF1 colocalizes with SUMO-1 in nuclear stress granules, which is prevented by mutation of the HSF1 lysine targeted for sumoylation.
Product Categories/Family for anti-HSF1 antibody	Crown Antibodies; Cardiovascular; Cell Biology; Neuroscience
References	Hilgarth, et al., Biochem Biophys Res Commun. 2003 Mar 28;303(1):196-200. He, H., et al., J. Biol. Chem. 278(37):35465-35475 (2003). Wang, X., et al., Mol. Cell. Biol. 23(17):6013-6026 (2003). Ignatenko, N.A., et al., Exp. Cell Res. 288(1):1-8 (2003). Soncin, F., et al., Biochem. Biophys. Res. Commun. 303(2):700-706 (2003).

NCBI AND UNIPROT INFORMATION

NCBI GI #	5031767
NCBI GeneID	3297
NCBI Accession #	NP_005517.1
NCBI GenBank Nucleotide #	NM_005526.2
UniProt Accession #	Q00613; Q53XT4; A8K4L0; A8MW26
Molecular Weight	57260
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
NCBI Protein Information	heat shock factor protein 1
UniProt Protein Name	Heat shock factor protein 1
UniProt Gene Name	HSF1
UniProt Synonym Gene Names	HSTF1; HSF 1; HSTF 1
UniProt Entry Name	HSF1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/polyclonal/hsf1-sumoylation-site-antibody-western-blot-immunofluorescence-elisa/288661>