

Product datasheet

Anti-HSF1 (phospho S303 + S307) antibody [EP1711Y] ab81281

RabMAb

[4 References](#) [2 Images](#)

Overview

Product name	Anti-HSF1 (phospho S303 + S307) antibody [EP1711Y]
Description	Rabbit monoclonal [EP1711Y] to HSF1 (phospho S303 + S307)
Host species	Rabbit
Specificity	ab81281 antibody recognises HSF1 (phospho S303 + S307)
Tested applications	Suitable for: WB, IHC-P Unsuitable for: Flow Cyt or IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide within Human HSF1 aa 250-350. The exact sequence is proprietary.
Positive control	HeLa cell lysates, Human breast carcinoma.
General notes	<p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.</p> <p>In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee.</p> <p>Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. If you have any questions,</p>

special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EP1711Y
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab81281** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/5000 - 1/50000. Predicted molecular weight: 57 kDa. Can be blocked with Recombinant Human HSF1 protein (ab78795) .
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt or IP.

Target

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.
Sequence similarities	Belongs to the HSF family.
Domain	the 9aaTAD motif is a transactivation domain present in a large number of yeast and animal transcription factors.
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. Phosphorylation on Ser-326 plays an important role in heat activation of HSF1 transcriptional activity.

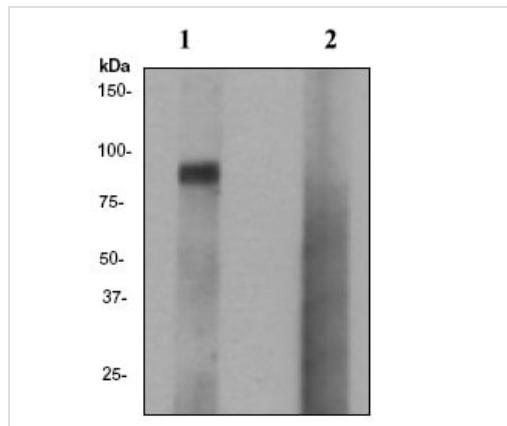
Sumoylated with SUMO1 and SUMO2 on heat-shock. Heat-inducible sumoylation occurs after 15 min of heat-shock, after which levels decrease and at 4 hours, levels return to control levels.

Sumoylation has no effect on HSE binding nor on transcriptional activity. Phosphorylation on Ser-303 is a prerequisite for sumoylation.

Cellular localization

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

Images



Western blot - Anti-HSF1 (phospho S303 + S307) antibody [EP1711Y] (ab81281)

All lanes : Anti-HSF1 (phospho S303 + S307) antibody [EP1711Y] (ab81281) at 1/50000 dilution

Lane 1 : HeLa cell lysate untreated

Lane 2 : HeLa cell lysate AP treated

Lysates/proteins at 10 µg per lane.

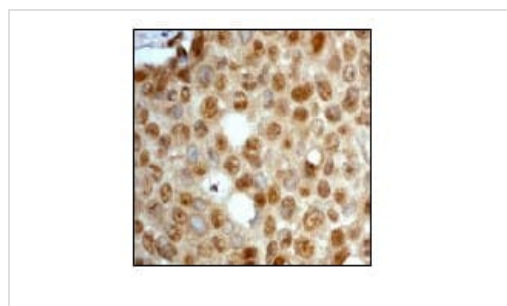
Secondary

All lanes : HRp labelled goat anti rabbit at 1/2000 dilution

Predicted band size: 57 kDa

Observed band size: 80 kDa

[why is the actual band size different from the predicted?](#)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HSF1 (phospho S303 + S307) antibody [EP1711Y] (ab81281)

Immunohistochemical analysis of paraffin-embedded human breast carcinoma using 1/100 ab81281

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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