

Datasheet for ABIN1741559

anti-HSF1 antibody (AA 425-439) (Atto 488)**5** Images[Go to Product page](#)

Overview

Quantity:	100 µg
Target:	HSF1
Binding Specificity:	AA 425-439
Reactivity:	Mouse
Host:	Rat
Clonality:	Monoclonal
Conjugate:	This HSF1 antibody is conjugated to Atto 488
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunoprecipitation (IP), Immunofluorescence (IF), Gel Shift (GS), Immunocytochemistry (ICC)

Product Details

Immunogen:	Purified recombinant mouse HSF1 protein, epitope mapping to amino acids 425-439
Clone:	4B4
Isotype:	IgG1
Specificity:	Detects ~85 kDa (unstressed cell lysates) and ~95 kDa (heat shocked cell lysates).
Cross-Reactivity:	Cow, Guinea Pig, Hamster, Human, Monkey, Mouse, Rabbit, Rat
Purification:	Protein G Purified

Target Details

Target:	HSF1
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Target Details

Alternative Name: HSF1 ([HSF1 Products](#))

Background: HSF1, or heat shock factor 1, belongs to a family of Heat Shock transcription factors that activate the transcription of genes encoding products required for protein folding, processing, targeting, degradation, and function (2). The up-regulation of HSP (heat shock proteins) expression by stressors is achieved at the level of transcription through a heat shock element (HSE) and a transcription factor (HSF) (3, 4, 5). Most HSFs have highly conserved amino acid sequences. On all HSFs there is a DNA binding domain at the N-terminus. Hydrophobic repeats located adjacent to this binding domain are essential for the formation of active trimers. Towards the C-terminal region another short hydrophobic repeat exists, and is thought to be necessary for suppression of trimerization (6). There are two main heat shock factors, 1 and 2. Mouse HSF1 exists as two isoforms, however in higher eukaryotes HSF1 is found in a diffuse cytoplasmic and nuclear distribution in un-stressed cells. Once exposed to a multitude of stressors, it localizes to discrete nuclear granules within seconds. As it recovers from stress, HSF1 dissipates from these granules to a diffuse nucleoplasmic distribution. HSF2 on the other hand is similar to mouse HSF1, as it exists as two isoforms, the alpha form being more transcriptionally active than the smaller beta form (7, 8). Various experiments have suggested that HSF2 may have roles in differentiation and development (9, 10, 11).

Gene ID: 15499

NCBI Accession: [NP_032322](#)

UniProt: [P38532](#)

Application Details

Application Notes:

- WB (1:1000)
- IHC (1:2000)
- ICC/IF (1:100)
- optimal dilutions for assays should be determined by the user.

Comment: 1 µg/ml of ABIN1741559 was sufficient for detection of HSF1 in 20 µg of heat shocked HeLa cell lysate by colorimetric immunoblot analysis using Rabbit anti-rat IgG: AP as the secondary antibody.

Restrictions: For Research Use only

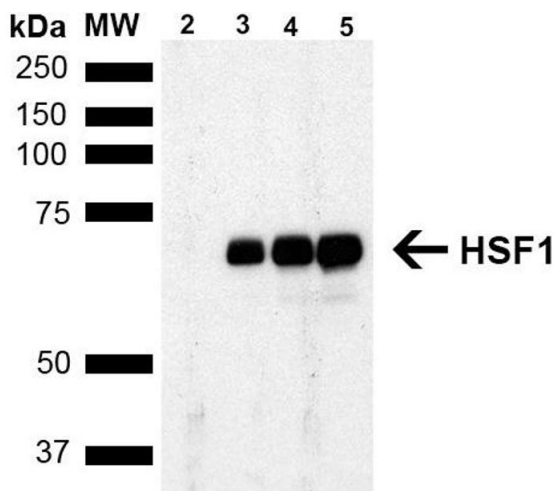
Handling

Format: Liquid

Handling

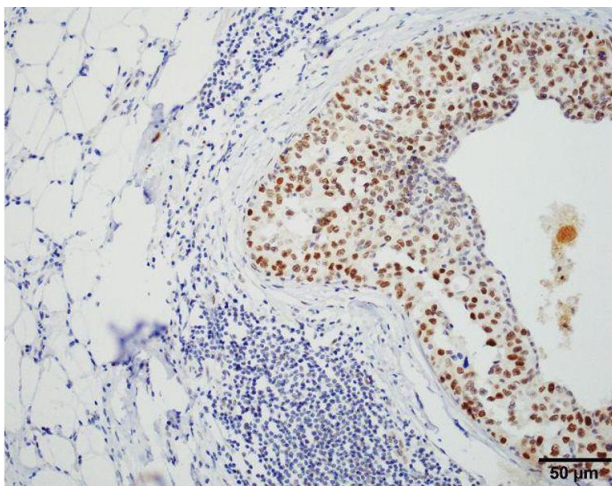
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.1 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Conjugated antibodies should be stored at 4°C

Images



Western Blotting

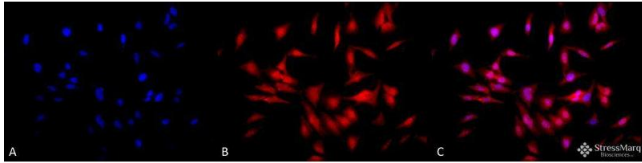
Image 1. Western Blot analysis of Human Breast adenocarcinoma cell line (MCF7) showing detection of ~65 kDa HSF1 protein using Rat Anti-HSF1 Monoclonal Antibody, Clone 4B4 (ABIN1741559). Lane 1: MW ladder. Lane 2: HSF1 null lysate prepared from mouse embryonic fibroblasts. Lane 3: MCF7 lysate (5 µg). Lane 4: MCF7 lysate (10 µg). Lane 5: MCF7 lysate (20 µg). Block: 1.5 % BSA for 30 minutes at RT. Primary Antibody: Rat Anti-HSF1 Monoclonal Antibody (ABIN1741559) at 1:1000 for 2 hours at RT. Secondary Antibody: Goat Anti-Rat IgG: HRP for 1 hour at RT. Predicted/Observed Size: ~65 kDa. Courtesy of: Dr. Sandro Santagata, Harvard Medical School.



Immunohistochemistry

Image 2. Immunohistochemistry analysis using Rat Anti-HSF1 Monoclonal Antibody, Clone 4B4. Tissue: Breast carcinoma. Species: Human. Fixation: 10% Formalin Solution for 20 hours at RT. Primary Antibody: Rat Anti-HSF1 Monoclonal Antibody at 1:2000 for 40 min. Secondary Antibody: Dako labeled Polymer HRP Anti-rat IgG, DAB Chromogen (brown) (Dako Envision+ System) for 30 min at RT. Counterstain: Mayer's Hematoxylin (purple/blue) nuclear stain for 1 minute at RT. Localization: Nuclear.

Magnification: 100X. Courtesy of: Dr. Sandro Santagata, Harvard Medical School.



Immunofluorescence (fixed cells)

Image 3. Immunocytochemistry/Immunofluorescence analysis using Rat Anti-HSF1 Monoclonal Antibody, Clone 4B4 . Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-HSF1 Monoclonal Antibody at 1:100 for 12 hours at 4°C. Secondary Antibody: APC Goat Anti-Rat (red) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Cytoplasm. Localizes to the nucleus upon activation. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-HSF1 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN1741559.