



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# Anti-HSF1 Antibody [10H4]

Rat Anti-Mouse HSF1 Monoclonal IgG1  
Catalog No. SMC-476



Discovery through partnership | Excellence through quality

## Overview

---

### Product Name

HSF1 Antibody

### Description

Rat Anti-Mouse HSF1 Monoclonal IgG1

### Species Reactivity

Human, Monkey, Mouse, Rat, Bovine, Guinea Pig (*Cavia porcellus*), Hamster, Rabbit

### Applications

WB, ICC/IF, IP, ELISA, GS

### Antibody Dilution

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

### Host Species

Rat

### Immunogen Species

Mouse

### Immunogen

Purified recombinant mouse HSF1 protein

### Concentration

1 mg/ml

### Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

## Properties

---

### Storage Buffer

PBS pH 7.4, 50% glycerol, 0.1% sodium azide

### Storage Temperature

-20°C

### Shipping Temperature

Blue Ice or 4°C

### Purification

---

Protein G Purified

---

**Clonality**

---

Monoclonal

---

**Clone Number**

---

10H4

---

**Isotype**

---

IgG1

---

**Specificity**

---

Detects ~85kDa (unstressed cell lysates) and ~95kDa (heat shocked cell lysates).

---

**Cite This Product**

---

Rat Anti-Mouse HSF1 Monoclonal, Clone 10H4 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-476)

---

**Certificate Of Analysis**

---

1 µg/ml of SMC-476 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.

---

**Biological Description**

---

**Alternative Names**

HSTF1 Antibody, Heat shock factor protein 1 Antibody, Heat shock transcription factor 1 Antibody, HSF 1 Antibody

---

**Research Areas**

---

Cancer, Heat Shock, Cardiovascular System, Cell Signaling, Epigenetics, Heart

---

**Cellular Localization**

---

Cytoplasm, Nucleus

---

**Accession Number**

---

NP\_032322.1

---

**Gene ID**

---

15499

---

**Swiss Prot**

---

P38532

---

**Scientific 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).

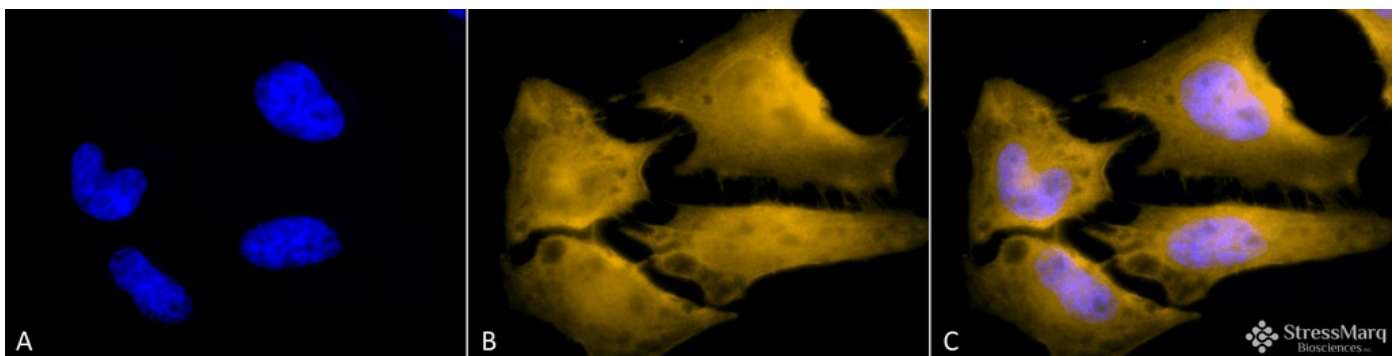
There are two main heat shock factors, 1 and 2. Mouse HSF1 exists as two isoforms, however in higher eukaryotes HSF1 is found in a diffuse cytoplasmic and nuclear distribution in un-stressed cells. Once exposed to a multitude of stressors, it localizes to discrete nuclear granules within seconds. As 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).

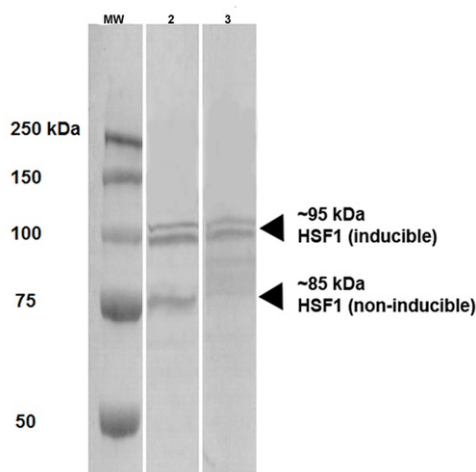
## References

1. Cotto J.J., Fox S.G. and Morimoto R.I. (1997) *J. Cell Science* 110: 2925-2934.
2. Morano K.A. and Thiele D.J. (1999). *Gene Expression* 7 (6): 271-82.
3. Tanaka K.I., et al. (2007). *JBC Papers Online Manuscript M704081200*.
4. Morimoto R. I. (1998) *Genes Dev* 12: 3788-3796.
5. McMillan D. R., et al. (1998) *J Bio Chem* 273: 7523-7528.
6. Jolly C., Usson Y. and Morimoto R.I. (1999) *Proc. Natl. Acad. Sci. USA* 96 (12): 6769- 6774.
7. Fiorenza M.T., et al. (1995) *Nucleic Acids Res.* 23 (3):467-474.
8. Goodson M.L., Park-Sarge O.K. and Sarge K.D. (1995) *Mol. Cell. Biol.* 15(10): 5288-5293.
9. Rallu M., et al. (1997) *Proc. Natl. Acad. Sci. USA* 94(6): 2392-2397.
10. Sarge K.D., et al. (1994) *Biol. Reprod.* 50(6): 1334-1343.
11. Murphy S.P., Gorzowski J.J., Sarge K.D. and Phillips B. (1994) *Mol. Cell. Biol.* 14(8):5309-5317.

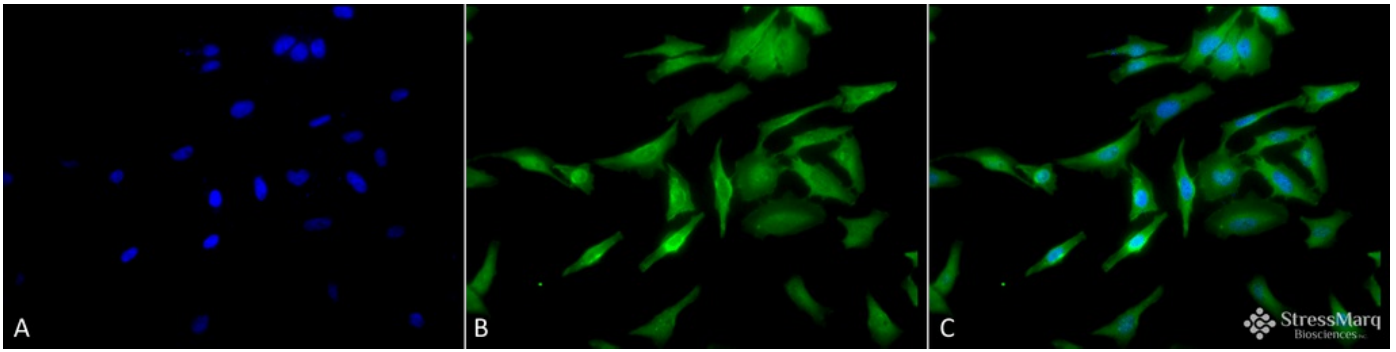
## Product Images



Immunocytochemistry/Immunofluorescence analysis using Rat Anti-HSF1 Monoclonal Antibody, Clone 10H4 (SMC-476). Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-HSF1 Monoclonal Antibody (SMC-476) at 1:100 for 12 hours at 4°C. Secondary Antibody: R-PE Goat Anti-Rat (yellow) 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: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-HSF1 Antibody. (C) Composite. Heat Shocked at 42°C for 1h.



Western Blot analysis of Human A431 and HEK293 cell lysates showing detection of HSF1 protein using Rat Anti-HSF1 Monoclonal Antibody, Clone 10H4 (SMC-476). Primary Antibody: Rat Anti-HSF1 Monoclonal Antibody (SMC-476) at 1:1000.



Immunocytochemistry/Immunofluorescence analysis using Rat Anti-HSF1 Monoclonal Antibody, Clone 10H4 (SMC-476). Tissue: Heat Shocked HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Rat Anti-HSF1 Monoclonal Antibody (SMC-476) at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Rat (green) 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.

## Product Citations (0)

---

Currently there are no citations for this product.

## Reviews

---

There are no reviews yet.