



3050 Spruce Street  
Saint Louis, Missouri 63103 USA  
Telephone 800-325-5832 • (314) 771-5765  
Fax (314) 286-7828  
email: techserv@sia.com  
sigma-aldrich.com

## Product Information

### Anti-Heat Shock Factor 2

Developed in Rabbit  
IgG Fraction of Antiserum

Product Number **H 6788**

#### Product Description

Anti-Heat Shock Factor 2 (HSF2) is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acids 425-438 of human HSF2, conjugated to KLH via an N-terminal added cysteine residue. The immunizing human sequence differs from the corresponding mouse and rat sequence by one amino acid. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-Heat Shock Factor 2 recognizes specifically canine, human, and rat heat shock factor 2. Applications include the detection of HSF2 by immunoblotting (71 kDa). An additional band that may correspond to the HSF2 isoform is observed at about 69 kDa. Staining of the HSF2 band in immunoblotting is specifically inhibited by the HSF2 immunizing peptide.

The heat shock response is a cellular defense mechanism against the harmful effects of physiological and environmental stress, such as heat shock. It is mainly regulated at the level of transcription by heat shock transcription factors (HSFs).<sup>1-3</sup> HSFs bind to heat shock elements on upstream sequences of heat shock genes.<sup>4</sup> Four members of the HSF family have been identified in vertebrates: HSF1, HSF2, HSF3, and HSF4.<sup>5-7</sup> Of these four members, HSF1 (529 amino acids) is the major stress-inducible form.

HSF2 is a 539 amino acids protein that exists as two isoforms. The shorter is HSF2- $\beta$ , and the longer HSF2- $\alpha$  (69 and 71 kDa respectively), the latter being a more potent transcriptional activator. Apparently, HSF2 is involved in the stress response, operating in a cell type specific manner through differential expression of the isoforms.<sup>8</sup> HSF2 cooperates in the stress response by interaction with HSF1, a state enhanced by heat shock. The heterodimers possess enhanced activity towards activation of the hsp70 promoter.<sup>9</sup>

#### Reagent

Anti-Heat Shock Factor 2 is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

#### Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

#### Product Profile

By immunoblotting, a working antibody dilution of 1:2,000 and 1:4,000 is recommended using HeLa cell extracts.

Recommendation: For immunoblotting, it is recommended to dilute the antibody in phosphate buffered saline containing 0.5% nonfat dry milk and 0.05% Tween<sup>TM</sup> 20.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

## References

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