

## Anti-Heat shock factor protein 2 HSF2 Antibody

Catalog Number: PA1607

### About HSF2

HSF2 (HEAT-SHOCK TRANSCRIPTION FACTOR 2), also called HEAT-SHOCK FACTOR 2, as well as the related gene HSF1, encodes a protein that binds specifically to the heat-shock element and has homology to HSFs of other species. The International Radiation Hybrid Mapping Consortium maps the HSF2 gene to chromosome 6. Mouse Hsf2 was expressed in all 3 embryonic layers at embryonic day 7.5 and that the head fold was strongly stained at embryonic day 8.5. In adults, Hsf2 expression is detected in spermatocytes and spermatogonia, but not in elongated spermatids, spermatozoa, or Sertoli cells. Hsp70i bookmarking is mediated by a transcription factor called HSF2, which binds this promoter in mitotic cells, recruits protein phosphatase-2A, and interacts with the CAPG subunit of the condensin enzyme to promote efficient dephosphorylation and inactivation of condensin complexes in the vicinity, thereby preventing compaction at this site. And Hsf2-null mice were born at the expected mendelian ratio but had brain abnormalities and meiotic and gametogenic defects in both genders.

### Overview

|                      |   |
|----------------------|---|
| Product Name         | Anti-Heat shock factor protein 2 HSF2 Antibody  |
| Reactive Species     | Human, Mouse, Rat   |
| Description          | Boster Bio Anti-Heat shock factor protein 2 HSF2 Antibody catalog # PA1607. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.                     |
| Application          | Flow Cytometry, IF, IHC, ICC, WB  |
| Clonality            | Polyclonal  |
| Formulation          | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.01mg NaN3.  |
| Storage Instructions | Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles. |
| Host                 | Rabbit  |
| Uniprot ID           | Q03933  |

### Technical Details

|                               |   |
|-------------------------------|---|
| Immunogen                     | A synthetic peptide corresponding to a sequence in the middle region of human HSF2, identical to the related mouse sequence, and different from the related rat sequence by one amino acid. |
| Predicted Reactive Species    | Hamster   |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.    |
| Cross Reactivity              | No cross-reactivity with other proteins   |
| Isotype                       | Rabbit IgG  |

|                     |  |
|---------------------|--|
| Form                | Lyophilized  |
| Concentration       | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.  |
| Purification        | Immunogen affinity purified.   |
| Suggested Dilutions | <p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat</p> <p>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Rat, By Heat</p> <p>Immunocytochemistry/Immunofluorescence, 2ug/ml, Human</p> <p>Flow Cytometry, 1-3ug/1x10<sup>6</sup> cells, Human</p> |

## Anti-Heat shock factor protein 2 HSF2 Antibody (PA1607) Images

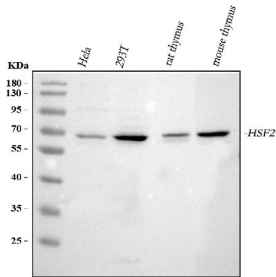


Figure 1. Western blot analysis of HSF2 using anti-HSF2 antibody (PA1607).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human Hela whole cell lysates,

Lane 2: human 293T whole cell lysates,

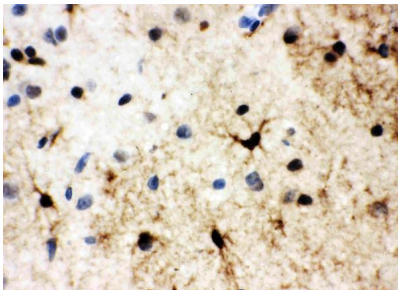
Lane 3: rat thymus tissue lysates,

Lane 4: mouse thymus tissue lysates.

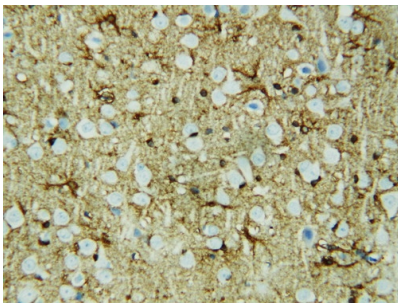
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes.

Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT.

The membrane was incubated with rabbit anti-HSF2 antigen affinity purified polyclonal antibody (Catalog # PA1607) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for HSF2 at approximately 60 kDa. The expected band size for HSF2 is at 60 kDa.



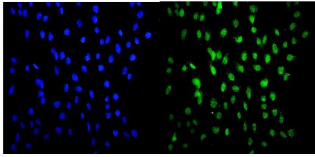
Anti-HSF2 antibody, PA1607, IHC(P)  
IHC(P): Rat Brain Tissue



Anti-HSF2 antibody, PA1607, IHC(P)  
IHC(P): Rat Brain Tissue

Figure 4. IF analysis of HSF2 using anti-HSF2 antibody (PA1607).

HSF2 was detected in immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-HSF2 Antibody (PA1607) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit



IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

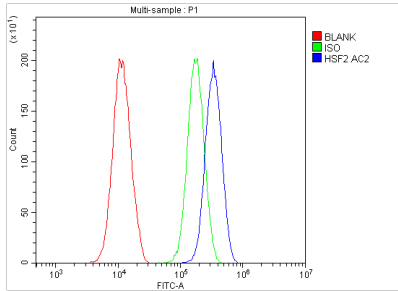


Figure 5. Flow Cytometry analysis of 293T cells using anti-HSF2 antibody (PA1607).

Overlay histogram showing 293T cells stained with PA1607 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-HSF2 Antibody (PA1607, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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