SANTA CRUZ BIOTECHNOLOGY, INC.

HSF2 (H-300): sc-13056

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Prokaryotic and eukaryotic cells respond to thermal and chemical stress by inducing a group of genes collectively designated heat shock genes. In eukaryotes, this gene expression is regulated primarily at the transcription level. Heat shock transcription factors (HSF, also designated HSTF) 1 and 2 are involved in this regulation. HSF1 and HSF2 are upregulated by estrogen at both the mRNA and protein level. HSF1 is normally found as a monomer whose transcriptional activity is repressed by constitutive phosphorylation. Upon activation, HSF1 forms trimers, gains DNA binding activity and is translocated to the nucleus. HSF2 activity is associated with differentiation and development, and, like HSF1, binds DNA as a trimer. Both HSF1 and HSF2 are known to be induced by proteasome inhibitors of the ubiquitin pathway.

CHROMOSOMAL LOCATION

Genetic locus: HSF2 (human) mapping to 6q22.31; Hsf2 (mouse) mapping to 10 B4.

SOURCE

HSF2 (H-300) is a rabbit polyclonal antibody raised against amino acids 237-536 of HSF2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13056 X, 200 µg/0.1 ml.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

HSF2 (H-300) is recommended for detection of HSF2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HSF2 (H-300) is also recommended for detection of HSF2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HSF2 siRNA (h): sc-35613, HSF2 siRNA (m): sc-35614, HSF2 shRNA Plasmid (h): sc-35613-SH, HSF2 shRNA Plasmid (m): sc-35614-SH, HSF2 shRNA (h) Lentiviral Particles: sc-35613-V and HSF2 shRNA (m) Lentiviral Particles: sc-35614-V.

HSF2 (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

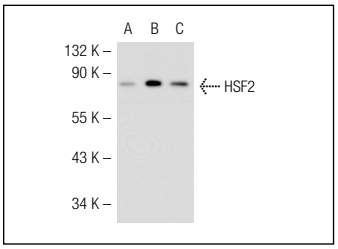
Molecular Weight of HSF2: 79 kDa.

Positive Controls: HSF2 (h): 293T Lysate: sc-111821, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

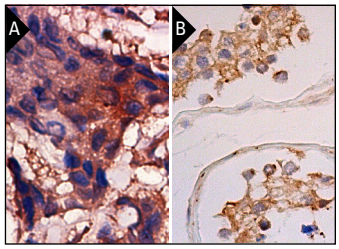
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



HSF2 (H-300): sc-13056. Western blot analysis of HSF2 expression in non-transfected 293T: sc-117752 (**A**), human HSF2 transfected 293T: sc-111821 (**B**) and HeLa (**C**) whole cell lysates.



HSTF2 (H-300): sc-13056. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells (**B**).

SELECT PRODUCT CITATIONS

1. Loison, F., et al. 2006. Upregulation of the clusterin gene after proteotoxic stress: implication of HSF1-HSF2 heterocomplexes. Biochem. J. 395: 223-231.
2. Sar, P., et al. 2007. Alterations in expression of senescence marker protein-30 gene by 3,3',5-triiodo-L-thyronine (T3). Mol. Cell. Biochem. 303: 239-242.
3. Ogata, T., et al. 2009. Prolonged exercise training induces long-term enhancement of HSP 70 expression in rat plantaris muscle. Am. J. Physiol. Regul. Integr. Comp. Physiol. 296: R1557-R1563.
4. Liu, F., et al. 2011. Expression of Hsf1, Hsf2, and Phlda1 in cells undergoing cryptorchid-induced apoptosis in rat testes. Mol. Reprod. Dev. 78: 283-291.

RESEARCH USE

For research use only, not for use in diagnostic procedures.