SANTA CRUZ BIOTECHNOLOGY, INC.

HSF2 (C-20): sc-8062

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.

REFERENCES

1. Tanguay, R.M. 1988. Transcriptional activation of heat shock genes in eukaryotes. Biochem. Cell Biol. 66: 584-593.
2. Yang, X., et al. 1995. Estrogen dependent expression of heat shock transcription factor: implications for uterine synthesis of heat shock proteins. J. Steroid Biochem. Mol. Biol. 52: 415-419.
3. Wyman, C., et al. 1995. Determination of HSF2 stoichiometry at looped DNA complexes using scanning force microscopy. EMBO J. 14: 117-123.
4. Rallu, M., et al. 1997. Function and regulation of HSF2 during mouse embryogenesis. Proc. Natl. Acad. Sci. USA 94: 2392-2397.

CHROMOSOMAL LOCATION

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

SOURCE

HSF2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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-8062 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8062 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

HSF2 (C-20) 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 (C-20) is also recommended for detection of HSF2 in additional species, including equine, canine and bovine.

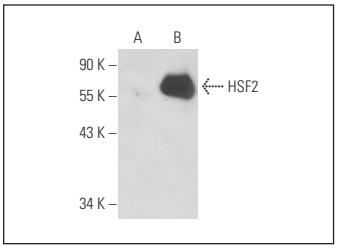
Suitable for use as control antibody for HSF2 siRNA (h): sc-35613, HSF2 siRNA (m): sc-35614, HSF2 shRNA Plasmid (h): sc-35613-SH, HSF2 shRNA Plasmid (m): sc-35614-SH, HSF2 shRNA (h) Lentiviral Particles: sc-35613-V and HSF2 shRNA (m) Lentiviral Particles: sc-35614-V.

HSF2 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

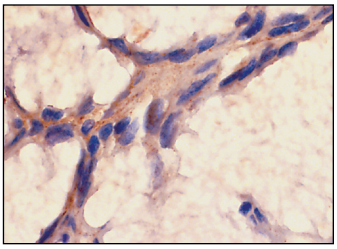
Molecular Weight of HSF2: 79 kDa.

Positive Controls: HSF2 (m): 293T Lysate: sc-120906, K-562 nuclear extract: sc-2130 or HeLa whole cell lysate: sc-2200.

DATA



HSF2 (C-20): sc-8062. Western blot analysis of HSF2 expression in non-transfected: sc-117752 (**A**) and mouse HSF2 transfected: sc-120906 (**B**) 293T whole cell lysates.



HSF2 (C-20): sc-8062. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tumor showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Kim, Y.C., et al. 2001. Hemin-induced activation of the thioredoxin gene by Nrf2. J. Biol. Chem. 276: 18399-18406.
2. Nakajima, H., et al. 2003. Transcriptional regulation of ILT family receptors. J. Immunol. 171: 6611-6620.
3. Trinklein, N.D., et al. 2004. Transcriptional regulation and binding of heat shock factor 1 and heat shock factor 2 to 32 human heat shock genes during thermal stress and differentiation. Cell. Stress Chaperones 9: 21-28.

MONOS Satisfaction Guaranteed

Try **HSF2 (G-11): sc-74529** or **HSF2 (3E2): sc-13517**, our highly recommended monoclonal aternatives to HSF2 (C-20).