SANTA CRUZ BIOTECHNOLOGY, INC.

# IRF-1 (F-8): sc-514934

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Interferon regulatory factor-1 (IRF-1) and IRF-2 have been identified as novel DNA-binding factors that function as regulators of both type I interferon (interferon-α and β) and interferon-inducible genes. The two factors are structurally related, particularly in their N-terminal regions, which confer DNA binding specificity. In addition, both bind to the same sequence within the promoters of interferon-α and interferon-β genes. IRF-1 functions as an activator of interferon transcription, while IRF-2 binds to the same *cis* elements and represses IRF-1 action. IRF-1 and IRF-2 have been reported to act in a mutually antagonistic manner in regulating cell growth; overexpression of the repressor IRF-2 leads to cell transformation while concomitant overexpression of IRF-1 causes reversion. IRF-1 and IRF-2 are members of a larger family of DNA binding proteins that includes IRF-3, IRF-4, IRF-5, IRF-6, IRF-7, ISGF-3γ p48 (a component of the ISGF-3 complex) and IFN consensus sequence-binding protein (ICSBP).

## REFERENCES


1. Fujita, T., et al. 1988. Evidence for a nuclear factor(s), IRF-1, mediating induction and silencing properties to human IFN-β gene regulatory elements. EMBO J. 7: 3397-3405.
2. Harada, H., et al. 1989. Structurally similar but functionally distinct factors, IRF-1 and IRF-2, bind to the same regulatory elements of IFN and IFN-inducible genes. Cell 58: 729-739.
3. Tanaka, N., et al. 1993. Recognition DNA sequence of interferon regulatory factor 1 (IRF-1) and IRF-2, regulators of cell growth and the interferon system. Mol. Cell. Biol. 13: 4531-4538.
4. Yamamoto, H., et al. 1994. The oncogenic transcription factor IRF-2 possesses a transcriptional repression and latent activation domain. Oncogene 9: 1423-1428.


## CHROMOSOMAL LOCATION

Genetic locus: IRF1 (human) mapping to 5q31.1; Irf1 (mouse) mapping to 11 B1.3.

## SOURCE

IRF-1 (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 304-328 at the C-terminus of IRF-1 of mouse origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ 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-514934 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-514934 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

IRF-1 (F-8) is recommended for detection of IRF-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

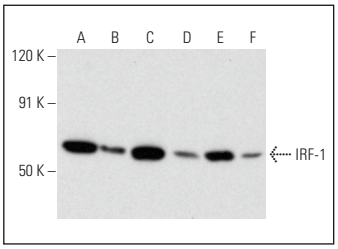
Suitable for use as control antibody for IRF-1 siRNA (h): sc-35706, IRF-1 siRNA (m): sc-35707, IRF-1 siRNA (r): sc-270261, IRF-1 shRNA Plasmid (h): sc-35706-SH, IRF-1 shRNA Plasmid (m): sc-35707-SH, IRF-1 shRNA Plasmid (r): sc-270261-SH, IRF-1 shRNA (h) Lentiviral Particles: sc-35706-V IRF-1 shRNA (m) Lentiviral Particles: sc-35707-V and IRF-1 shRNA (r) Lentiviral Particles: sc-270261-V.

IRF-1 (F-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

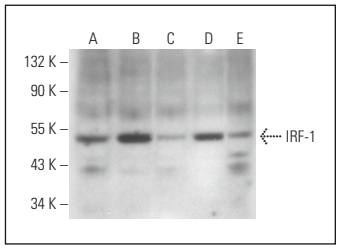
Molecular Weight of IRF-1: 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or Sol8 cell lysate: sc-2249.

## DATA




IRF-1 (F-8): sc-514934. Western blot analysis of IRF-1 expression in Jurkat (**A**), HeLa (**B**), MOLT-4 (**C**), Hep G2 (**D**), MDA-MB-231 (**E**) and THP-1 (**F**) whole cell lysates.




IRF-1 (F-8): sc-514934. Western blot analysis of IRF-1 expression in IFN-γ-treated RAW 264.7 (**A**), Jurkat (**B**), NIH/3T3 (**C**) and Sol8 (**D**) whole cell lysates and NIH/3T3 nuclear extract (**E**).

## SELECT PRODUCT CITATIONS


1. Jeong, S.I., et al. 2018. XAF1 forms a positive feedback loop with IRF-1 to drive apoptotic stress response and suppress tumorigenesis. Cell Death Dis. 9: 806.


## RESEARCH USE

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

## PROTOCOLS

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

CONJUGATES

See **IRF-1 (E-4): sc-514544** for IRF-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.