

IRF-1 (20): sc-135952

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-3 γ 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.
5. Tanaka, N., et al. 1994. Cellular commitment to oncogene-induced transformation or apoptosis is dependent on the transcription factor IRF-1. *Cell* 77: 829-839.
6. Darnell, J.E., Jr., et al. 1994. JAK-Stat pathways and transcriptional activation in response to IFNs and other extracellular signaling proteins. *Science* 264: 1415-1421.

CHROMOSOMAL LOCATION

Genetic locus: IRF1 (human) mapping to 5q31.1.

SOURCE

IRF-1 (20) is a mouse monoclonal antibody raised against amino acids 159-279 of IRF-1 of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

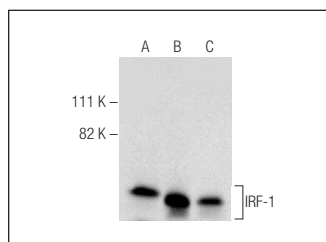
IRF-1 (20) is recommended for detection of IRF-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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

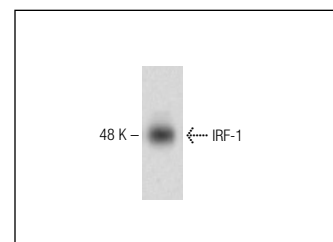
Molecular Weight of IRF-1: 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Jurkat nuclear extract: sc-2132 or MOLT-4 nuclear extract: sc-2151.

DATA



IRF-1 (20): sc-135952. Western blot analysis of IRF-1 expression in Jurkat whole cell lysate (A) and Jurkat (B) and MOLT-4 (C) nuclear extracts.



IRF-1 (20): sc-135952. Western blot analysis of IRF-1 expression in MOLT-3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Miranda-Gonçalves, V., et al. 2017. Metabolic alterations underlying Bevacizumab therapy in glioblastoma cells. *Oncotarget* 8: 103657-103670.
2. Feng, J., et al. 2018. Interferon-stimulated gene (ISG)-expression screening reveals the specific antibunyaviral activity of ISG20. *J. Virol.* 92 pii: e02140-17.

STORAGE

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

PROTOCOLS

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



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.