

IRF-1 (B-1): sc-137061

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).

CHROMOSOMAL LOCATION

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

SOURCE

IRF-1 (B-1) is a mouse monoclonal antibody raised against amino acids 121-325 of IRF-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG κ kappa light chain 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-137061 X, 200 μ g/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.

RESEARCH USE

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

APPLICATIONS

IRF-1 (B-1) is recommended for detection of IRF-1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 shRNA Plasmid (h): sc-35706-SH and IRF-1 shRNA (h) Lentiviral Particles: sc-35706-V.

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

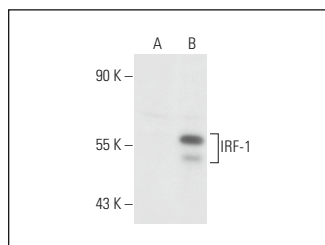
Molecular Weight of IRF-1: 48 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, Jurkat whole cell lysate: sc-2204 or IRF-1 (h2): 293T Lysate: sc-159114.

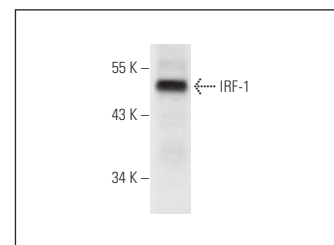
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IRF-1 (B-1): sc-137061. Western blot analysis of IRF-1 expression in non-transfected: sc-117752 (A) and human IRF-1 transfected: sc-159114 (B) 293T whole cell lysates.



IRF-1 (B-1): sc-137061. Western blot analysis of IRF-1 expression in Jurkat nuclear extract.

SELECT PRODUCT CITATIONS

- Thapa, R.J., et al. 2011. NF κ B protects cells from γ interferon-induced RIP1-dependent necroptosis. *Mol. Cell. Biol.* 31: 2934-2946.
- Murtas, D., et al. 2013. IRF-1 responsiveness to IFN- γ predicts different cancer immune phenotypes. *Br. J. Cancer* 109: 76-82.
- Thapa, R.J., et al. 2013. NF κ B inhibition by bortezomib permits IFN- γ -activated RIP1 kinase-dependent necrosis in renal cell carcinoma. *Mol. Cancer Ther.* 12: 1568-1578.
- Wang, F., et al. 2016. Alarmin human α defensin HNP1 activates plasmacytoid dendritic cells by triggering NF κ B and IRF1 signaling pathways. *Cytokine* 83: 53-60.
- Vierbuchen, T., et al. 2017. The human-associated archaeon methanospira stadtmanae is recognized through its RNA and induces TLR8-dependent NLRP3 inflammasome activation. *Front. Immunol.* 8: 1535.
- Beug, S.T., et al. 2019. The transcription factor SP3 drives TNF- α expression in response to Smac mimetics. *Sci. Signal.* 12: eaat9563.
- Hannes, S., et al. 2021. The Smac mimetic BV6 cooperates with STING to induce necroptosis in apoptosis-resistant pancreatic carcinoma cells. *Cell Death Dis.* 12: 816.



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.