

IRF-1 (E-4): sc-514544

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; Irf1 (mouse) mapping to 11 B1.3.

SOURCE

IRF-1 (E-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 307-328 at the C-terminus of IRF-1 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} 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-514544 X, 200 μ g/0.1 ml.

IRF-1 (E-4) is available conjugated to agarose (sc-514544 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514544 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514544 PE), fluorescein (sc-514544 FITC), Alexa Fluor® 488 (sc-514544 AF488), Alexa Fluor® 546 (sc-514544 AF546), Alexa Fluor® 594 (sc-514544 AF594) or Alexa Fluor® 647 (sc-514544 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514544 AF680) or Alexa Fluor® 790 (sc-514544 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514544 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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.

APPLICATIONS

IRF-1 (E-4) 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 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).

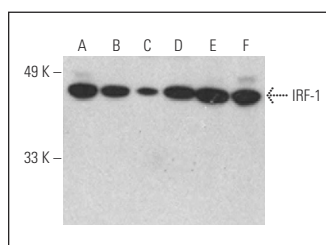
Suitable for use as control antibody for IRF-1 siRNA (h): sc-35706, IRF-1 siRNA (m): sc-35707, IRF-1 siRNA (r): sc-270261, IRF-1 shRNA Plasmid (h): sc-35706-SH, IRF-1 shRNA Plasmid (m): sc-35707-SH, IRF-1 shRNA Plasmid (r): sc-270261-SH, IRF-1 shRNA (h) Lentiviral Particles: sc-35706-V, IRF-1 shRNA (m)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

IRF-1 (E-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

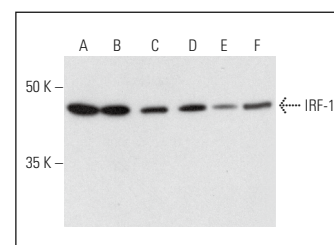
Molecular Weight of IRF-1: 48 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, MOLT-4 cell lysate: sc-2233 or NIH/3T3 whole cell lysate: sc-2210.

DATA



IRF-1 (E-4) HRP: sc-514544 HRP. Direct western blot analysis of IRF-1 expression in NIH/3T3 (A), HeLa (B), MOLT-4 (C), Hep G2 (D), RAW 264.7 (E) and F9 (F) whole cell lysates.



IRF-1 (E-4): sc-514544. Western blot analysis of IRF-1 expression in NIH/3T3 (A), HeLa (B), MOLT-4 (C), Hep G2 (D), MDA-MB-231 (E) and THP-1 (F) whole cell lysates.

SELECT PRODUCT CITATIONS

- Arifuzzaman, S., et al. 2017. Selective inhibition of EZH2 by a small molecule inhibitor regulates microglial gene expression essential for inflammation. *Biochem. Pharmacol.* 137: 61-80.
- Fan, K.Q., et al. 2019. Stress-induced metabolic disorder in peripheral CD4⁺ T cells leads to anxiety-like behavior. *Cell* 179: 864-879.e19.
- Huang, Y., et al. 2020. Indoxyl sulfate induces intestinal barrier injury through IRF1-DRP1 axis-mediated mitophagy impairment. *Theranostics* 10: 7384-7400.
- Das, S., et al. 2021. Super enhancer-mediated transcription of miR146a-5p drives M2 polarization during *Leishmania donovani* infection. *PLoS Pathog.* 17: e1009343.

RESEARCH USE

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