SANTA CRUZ BIOTECHNOLOGY, INC.

IRF-3 (SL-12): sc-33641

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 and IFN consensus sequence-binding protein (ICSBP).

CHROMOSOMAL LOCATION

Genetic locus: IRF3 (human) mapping to 19q13.33; Irf3 (mouse) mapping to 7 B4.

SOURCE

IRF-3 (SL-12) is a mouse monoclonal antibody raised against recombinant IRF-3 fusion protein corresponding to human IRF-3 (amino acids 56-427).

PRODUCT

Each vial contains 200 µg IgG_1 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-33641 X, 200 µg/0.1 ml.

IRF-3 (SL-12) is available conjugated to agarose (sc-33641 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33641 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33641 PE), fluorescein (sc-33641 FITC), Alexa Fluor® 488 (sc-33641 AF488), Alexa Fluor® 546 (sc-33641 AF546), Alexa Fluor® 594 (sc-33641 AF594) or Alexa Fluor® 647 (sc-33641 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33641 AF680) or Alexa Fluor® 790 (sc-33641 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IRF-3 (SL-12) is recommended for detection of IRF-3 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for IRF-3 siRNA (h): sc-35710, IRF-3 siRNA (m): sc-35711, IRF-3 shRNA Plasmid (h): sc-35710-SH, IRF-3 shRNA Plasmid (m): sc-35711-SH, IRF-3 shRNA (h) Lentiviral Particles: sc-35710-V and IRF-3 shRNA (m) Lentiviral Particles: sc-35711-V.

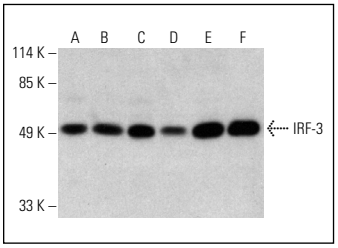
IRF-3 (SL-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of IRF-3: 50 kDa.

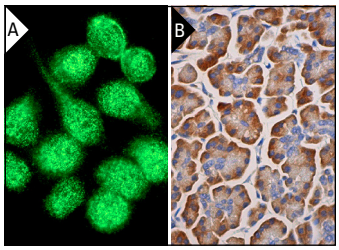
STORAGE

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

DATA



IRF-3 (SL-12) HRP: sc-33641 HRP. Direct western blot analysis of IRF-3 expression in HL-60 (**A**), HT-1080 (**B**), U-937 (**C**), HeLa (**D**), K-562 (**E**) and MCF7 (**F**) whole cell lysates.



IRF-3 (SL-12): sc-33641. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Wu, Y., et al. 2011. Up-regulation and sustained activation of Stat1 are essential for interferon-γ (IFN-γ)-induced dual oxidase 2 (Duox2) and dual oxidase A2 (DuoxA2) expression in human pancreatic cancer cell lines. J. Biol. Chem. 286: 12245-12256.
2. Villalobos, X., et al. 2014. Stability and immunogenicity properties of the gene-silencing polypurine reverse Hoogsteen hairpins. Mol. Pharm. 11: 254-264.
3. Morin, G., et al. 2015. A rhesus rhadinovirus viral interferon (IFN) regulatory factor is virion associated and inhibits the early IFN antiviral response. J. Virol. 89: 7707-7721.
4. Lin, W., et al. 2016. Syndecan-4 negatively regulates antiviral signalling by mediating RIG-I deubiquitination via CYLD. Nat. Commun. 7: 11848.
5. John, S.P., et al. 2018. IFIT1 exerts opposing regulatory effects on the inflammatory and interferon gene programs in LPS-activated human macrophages. Cell Rep. 25: 95-106.e6.
6. Ling, T., et al. 2018. TARBP2 negatively regulates IFN-β production and innate antiviral response by targeting MAVS. Mol. Immunol. 104: 1-10.
7. Liuyu, T., et al. 2019. Induction of OTUD4 by viral infection promotes antiviral responses through deubiquitinating and stabilizing MAVS. Cell Res. 29: 67-79.
8. García-Belmonte, R., et al. 2019. African swine fever virus Armenia/07 virulent strain controls IFN-β production through cGAS-STING pathway. J. Virol. 93: e02298-18.

RESEARCH USE

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