

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

## 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- $\alpha$  and  $\beta$ ) 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- $\alpha$  and interferon- $\beta$  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 $\gamma$  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  $\mu$ g 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  $\mu$ g/0.1 ml.

IRF-3 (SL-12) is available conjugated to agarose (sc-33641 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33641 HRP), 200  $\mu$ g/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  $\mu$ g/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  $\mu$ g/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  $\mu$ g per 100-500  $\mu$ g 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.

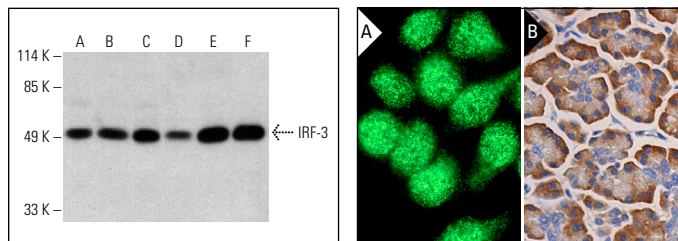
IRF-3 (SL-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

- Wu, Y., et al. 2011. Up-regulation and sustained activation of Stat1 are essential for interferon- $\gamma$  (IFN- $\gamma$ )-induced dual oxidase 2 (Duox2) and dual oxidase A2 (DuoxA2) expression in human pancreatic cancer cell lines. *J. Biol. Chem.* 286: 12245-12256.
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- Lin, W., et al. 2016. Syndecan-4 negatively regulates antiviral signalling by mediating RIG-I deubiquitination via CYLD. *Nat. Commun.* 7: 11848.
- 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.
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- Liuyu, T., et al. 2019. Induction of OTUD4 by viral infection promotes antiviral responses through deubiquitinating and stabilizing MAVS. *Cell Res.* 29: 67-79.
- García-Belmonte, R., et al. 2019. African swine fever virus Armenia/07 virulent strain controls IFN- $\beta$  production through cGAS-STING pathway. *J. Virol.* 93: e02298-18.

## RESEARCH USE

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

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