SANTA CRUZ BIOTECHNOLOGY, INC.

IRF-3 (C-20): sc-15991

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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IRF-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15991 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-15991 X, 200 µg/0.1 ml.

APPLICATIONS

IIRF-3 (C-20) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IRF-3 (C-20) is also recommended for detection of IRF-3 in additional species, including canine and porcine.

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 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

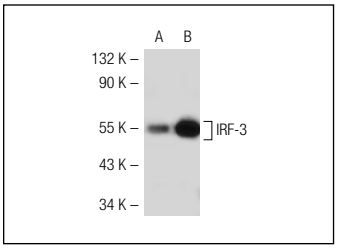
Molecular Weight of IRF-3: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

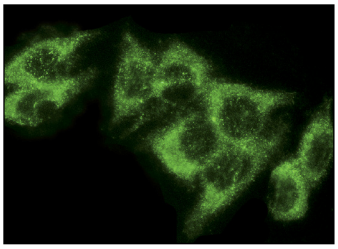
STORAGE

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

DATA



IRF-3 (C-20): sc-15991. Western blot analysis of IRF-3 expression in non-transfected: sc-117752 (**A**) and human IRF-3 transfected: sc-117389 (**B**) 293T whole cell lysates.



IRF-3 (C-20): sc-15991: Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Obata, Y., et al. 2005. Role of cyclophilin B in activation of interferon regulatory factor-3. J. Biol. Chem. 280: 18355-18360.
2. Huang, Y.C., et al. 2005. 3-Nitrotyrosine attenuates respiratory syncytial virus infection in human bronchial epithelial cell line. Am. J. Physiol. Lung Cell. Mol. Physiol. 288: L988-L996.
3. Saira, K., et al. 2007. The infected cell protein 0 encoded by bovine herpesvirus 1 (bICP0) induces degradation of interferon response factor 3 and, consequently, inhibits β interferon promoter activity. J. Virol. 81: 3077-3086.
4. Nencioni, A., et al. 2007. Histone deacetylase inhibitors affect dendritic cell differentiation and immunogenicity. Clin. Cancer Res. 13: 3933-3941.
5. Zurhove, K., et al. 2008. γ-secretase limits the inflammatory response through the processing of LRP1. Sci. Signal. 1: ra15.
6. Hipp, M.M., et al. 2008. Sorafenib, but not sunitinib, affects function of dendritic cells and induction of primary immune responses. Blood 111: 5610-5620.
7. Nociari, M., et al. 2009. Adenovirus induction of IRF-3 occurs through a binary trigger targeting Jun N-terminal kinase and TBK1 kinase cascades and type I interferon autocrine signaling. J. Virol. 83: 4081-4091.
8. Li, Y., et al. 2011. Identification of novel alternative splicing variants of interferon regulatory factor 3. Biochim. Biophys. Acta 1809: 166-175.

RESEARCH USE

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