

# IRF-7 (C-20): sc-15994

## 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).

## REFERENCES

1. Darnell, J.E., Jr., et al. 1994. Jak/STAT pathways and transcriptional activation in response to IFNs and other extracellular signaling proteins. *Science* 264: 1415-1421.
2. Mamane, Y., et al. 1999. Interferon regulatory factors: the next generation. *Gene* 237: 1-14.
3. Zhang, L. and Pagano, J.S. 1997. IRF-7, a new interferon regulatory factor associated with Epstein-Barr virus latency. *Mol. Cell. Biol.* 17: 5748-5757.

## CHROMOSOMAL LOCATION

Genetic locus: IRF7 (human) mapping to 11p15.5; Irf7 (mouse) mapping to 7 F5.

## SOURCE

IRF-7 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IRF-7 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15994 P, (100  $\mu$ g 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-15994 X, 200  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

IRF-7 (C-20) is recommended for detection of IRF-7 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-7 (C-20) is also recommended for detection of IRF-7 in additional species, including equine.

Suitable for use as control antibody for IRF-7 siRNA (h): sc-38011, IRF-7 siRNA (m): sc-38012, IRF-7 shRNA Plasmid (h): sc-38011-SH, IRF-7 shRNA Plasmid (m): sc-38012-SH, IRF-7 shRNA (h) Lentiviral Particles: sc-38011-V and IRF-7 shRNA (m) Lentiviral Particles: sc-38012-V.

IRF-7 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of IRF-7 isoform A: 54 kDa.

Molecular Weight of IRF-7 isoform B: 51 kDa.

Molecular Weight of IRF-7 isoform C: 18 kDa.

Molecular Weight of IRF-7 isoform D: 56 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Jurkat + PMA cell lysate: sc-24718 or HuT 78 whole cell lysate: sc-2208.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Muto, V., et al. 2011. Human papillomavirus type 16 E5 protein induces expression of  $\beta$  interferon through interferon regulatory factor 1 in human keratinocytes. *J. Virol.* 85: 5070-5080.
2. Kocic, G., et al. 2011. Circulating ribonucleic acids and metabolic stress parameters may reflect progression of autoimmune or inflammatory conditions in juvenile type 1 diabetes. *ScientificWorldJournal.* 11: 1496-1508.



Try **IRF-7 (G-8): sc-74472** or **IRF-7 (F-1): sc-74471**, our highly recommended monoclonal alternatives to IRF-7 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **IRF-7 (G-8): sc-74472**.