

## IRF-3 (D-3): sc-376455

### 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 (D-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 389-427 near the C-terminus of IRF-3 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> 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-376455 X, 200  $\mu$ g/0.1 ml.

IRF-3 (D-3) is available conjugated to agarose (sc-376455 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376455 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376455 PE), fluorescein (sc-376455 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376455 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376455 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376455 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376455 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376455 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376455 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376455 P, (100  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.

### APPLICATIONS

IRF-3 (D-3) is recommended for detection of IRF-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (start-ing dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

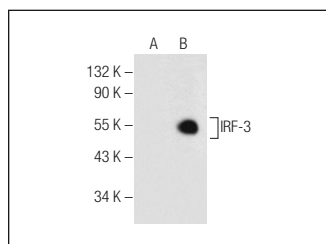
Suitable for use as control antibody for IRF-3 siRNA (h): sc-35710, IRF-3 siRNA (m): sc-35711, IRF-3 shRNA Plasmid (h): sc-35710-SH, IRF-3 shRNA Plasmid (m): sc-35711-SH, IRF-3 shRNA (h) Lentiviral Particles: sc-35710-V and IRF-3 shRNA (m) Lentiviral Particles: sc-35711-V.

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

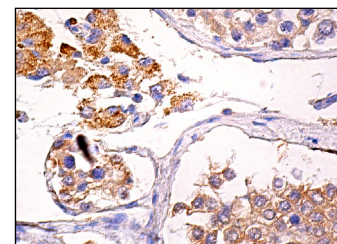
Molecular Weight of IRF-3: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or IRF-3 (h): 293T Lysate: sc-117389.

### DATA



IRF-3 (D-3): sc-376455. 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 (D-3): sc-376455. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

### SELECT PRODUCT CITATIONS

- Xia, P., et al. 2016. Glutamylation of the DNA sensor cGAS regulates its binding and synthase activity in antiviral immunity. *Nat. Immunol.* 17: 369-378.
- Igase, M., et al. 2019. Anti-tumour activity of oncolytic reovirus against canine histiocytic sarcoma cells. *Vet. Comp. Oncol.* 17: 184-193.
- Lim, T.J.F., et al. 2020. Talin1 controls dendritic cell activation by regulating TLR complex assembly and signaling. *J. Exp. Med.* 217: e20191810.
- Kim, K.S., et al. 2021. Estrogen-related receptor  $\gamma$  increases poly(I:C)-mediated type I IFN expression in mouse macrophages. *J. Leukoc. Biol.* 109: 865-875.
- Reis, S.K., et al. 2022. Effects of combined OncoTherad immunotherapy and probiotic supplementation on modulating the chronic inflammatory process in colorectal carcinogenesis. *Tissue Cell* 75: 101747.

### RESEARCH USE

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