SANTA CRUZ BIOTECHNOLOGY, INC.

IRF-6 (F-12): sc-377043

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).

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. Kondo, S., et al. 2002. Mutations in IRF-6 cause Van der Woude and popliteal pterygium syndromes. Nat. Genet. 32: 285-289.
4. Zucchero, T.M., et al. 2004. Interferon regulatory factor 6 (IRF-6) gene variants and the risk of isolated cleft lip or palate. N. Engl. J. Med. 351: 769-780.

CHROMOSOMAL LOCATION

Genetic locus: IRF6 (human) mapping to 1q32.2; Irf6 (mouse) mapping to 1 H6.

SOURCE

IRF-6 (F-12) is a mouse monoclonal antibody raised against amino acids 91-229 mapping within an internal region of IRF-6 of human origin.

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.

IRF-6 (F-12) is available conjugated to agarose (sc-377043 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377043 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377043 PE), fluorescein (sc-377043 FITC), Alexa Fluor® 488 (sc-377043 AF488), Alexa Fluor® 546 (sc-377043 AF546), Alexa Fluor® 594 (sc-377043 AF594) or Alexa Fluor® 647 (sc-377043 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377043 AF680) or Alexa Fluor® 790 (sc-377043 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

IRF-6 (F-12) is recommended for detection of IRF-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

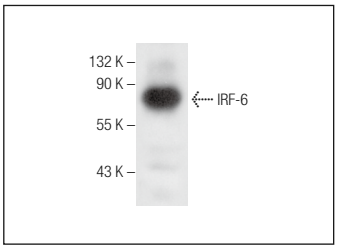
IRF-6 (F-12) is also recommended for detection of IRF-6 in additional species, including equine and bovine.

Suitable for use as control antibody for IRF-6 siRNA (h): sc-105582, IRF-6 siRNA (m): sc-146286, IRF-6 shRNA Plasmid (h): sc-105582-SH, IRF-6 shRNA Plasmid (m): sc-146286-SH, IRF-6 shRNA (h) Lentiviral Particles: sc-105582-V and IRF-6 shRNA (m) Lentiviral Particles: sc-146286-V.

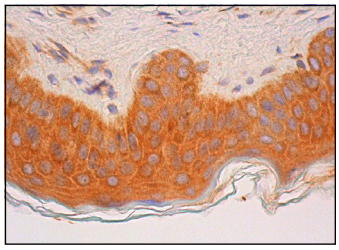
Molecular Weight of IRF-6: 52 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132 or Jurkat whole cell lysate: sc-2204.

DATA



IRF-6 (F-12): sc-377043. Western blot analysis of IRF-6 expression in Jurkat whole cell lysate.



IRF-6 (F-12): sc-377043. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes.

SELECT PRODUCT CITATIONS

1. Wang, C., et al. 2015. Effect of Liuweibuqi capsule, a Chinese patent medicine, on the JAK1/Stat3 pathway and MMP9/TIMP1 in a chronic obstructive pulmonary disease rat model. J. Tradit. Chin. Med. 35: 54-62.
2. Kanayama, M., et al. 2017. Hyperactive mTOR induces neuroendocrine differentiation in prostate cancer cell with concurrent up-regulation of IRF-1. Prostate 77: 1489-1498.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.