SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-α2 (MT4/E4): sc-53342

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The genes encoding type I interferons (IFNs), which include 14 IFN-α genes, one IFN-β gene, one IFN-ω (also known as IFN-α II1) gene and a number of IFN-ω pseudogenes, are clustered on human chromosome 9. Interferons-α and -β are cytokines that are widely known to induce potent antiviral activity. IFN-α and -β exert a variety of other biological effects, including antitumor and immunomodulatory activities, and are increasingly used clinically to treat a range of malignancies, myelodysplasias and autoimmune diseases. IFN-ω is antigenically different from human IFN-α, IFN-β or IFN-γ, but is a component of natural mixtures of IFN species produced by virus-induced leukocytes or Burkitt's lymphoma cells. The type I interferon receptor (IFN-αR) interacts with IFN-α, IFN-β and IFN-ω, and seems to be a multi-subunit receptor.

REFERENCES

1. Adolf, G.R. 1987. Antigenic structure of human interferon-ω1 (interferon-α II1): comparison with other human interferons. J. Gen. Virol. 68: 1669-1676.
2. Lim, J.K., et al. 1994. Intrinsic ligand binding properties of the human and bovine α-interferon receptors. FEBS Lett. 350: 281-286.
3. Hussain, M., et al. 1996. Identification of interferon-α 7, -α 14 and -α 21 variants in the genome of a large human population. J. Interferon Cytokine Res. 16: 853-859.
4. Mire-Sluis, A.R., et al. 1996. An anti-cytokine bioactivity assay for interferons-α, -β and -ω. J. Immunol. Methods 195: 55-61.
5. Cutrone, E.C., et al. 1997. Contributions of cloned type I interferon receptor subunits to differential ligand binding. FEBS Lett. 404: 197-202.
6. Rozera, C., et al. 1999. Interferon (IFN)-β gene transfer into TS/A adenocarcinoma cells and comparison with IFN-α: differential effects on tumor-igenicity and host response. Am. J. Pathol. 154: 1211-1222.

CHROMOSOMAL LOCATION

Genetic locus: IFNA2 (human) mapping to 9p21.3.

SOURCE

IFN-α2 (MT4/E4) is a mouse monoclonal antibody raised against recombinant IFN-α2 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. Also available azide-free for Neutralisations, sc-53342 L, 200 µg/0.1 ml.

IFN-α2 (MT4/E4) is available conjugated to agarose (sc-53342 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53342 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53342 PE), fluorescein (sc-53342 FITC), Alexa Fluor® 488 (sc-53342 AF488), Alexa Fluor® 546 (sc-53342 AF546), Alexa Fluor® 594 (sc-53342 AF594) or Alexa Fluor® 647 (sc-53342 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53342 AF680) or Alexa Fluor® 790 (sc-53342 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

IFN-α2 (MT4/E4) is recommended for detection of IFN-α2 of 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

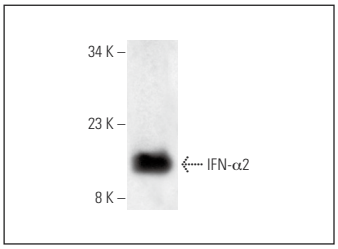
Suitable for use as control antibody for IFN-α2 siRNA (h): sc-63324, IFN-α2 shRNA Plasmid (h): sc-63324-SH and IFN-α2 shRNA (h) Lentiviral Particles: sc-63324-V.

Molecular Weight of IFN-α2: 19 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IFN-α2 (MT4/E4): sc-53342. Western blot analysis of human IFN-α2.

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 for detailed protocols and support products.