

IFN- α (F-7): sc-373757

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. Interferon- α and - β are cytokines that are widely known to induce potent antiviral activity. They 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- α R) interacts with IFN- α , IFN- β and IFN- ω , and seems to be a multisubunit receptor.

REFERENCES

- Adolf, G.R. 1987. Antigenic structure of human interferon ω 1 (interferon- α II1): comparison with other human interferons. *J. Gen. Virol.* 68: 1669-1676.
- Lim, J.K., et al. 1994. Intrinsic ligand binding properties of the human and bovine α -interferon receptors. *FEBS Lett.* 350: 281-286.
- 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.
- Mire-Sluis, A.R., et al. 1996. An anti-cytokine bioactivity assay for interferons- α , - β and - ω . *J. Immunol. Methods* 195: 55-61.
- Cutrone, E.C., et al. 1997. Contributions of cloned type I interferon receptor subunits to differential ligand binding. *FEBS Lett.* 404: 197-202.

CHROMOSOMAL LOCATION

Genetic locus: IFNA1/IFNA13 (human) mapping to 9p21.3.

SOURCE

IFN- α (F-7) is a mouse monoclonal antibody raised against full-length recombinant IFN- α 1/13 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IFN- α (F-7) is available conjugated to agarose (sc-373757 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373757 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373757 PE), fluorescein (sc-373757 FITC), Alexa Fluor[®] 488 (sc-373757 AF488), Alexa Fluor[®] 546 (sc-373757 AF546), Alexa Fluor[®] 594 (sc-373757 AF594) or Alexa Fluor[®] 647 (sc-373757 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-373757 AF680) or Alexa Fluor[®] 790 (sc-373757 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

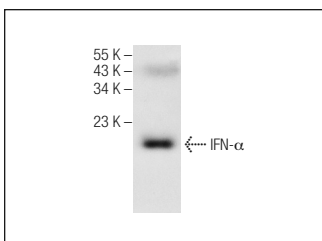
IFN- α (F-7) is recommended for detection of IFN- α 1 and IFN- α 13 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with other IFN- α family members.

Molecular Weight of IFN- α : 19 kDa.

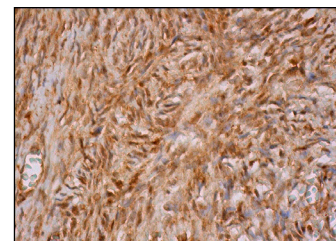
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



IFN- α (F-7): sc-373757. Western blot analysis of human recombinant IFN- α .



IFN- α (F-7): sc-373757. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic and nuclear staining of ovarian stroma cells.

SELECT PRODUCT CITATIONS

- Wagner, F., et al. 2019. Neoadjuvant radiochemotherapy significantly alters the phenotype of plasmacytoid dendritic cells and 6-sulfo lacNAc⁺ monocytes in rectal cancer. *Front. Immunol.* 10: 602.
- Wu, H., et al. 2020. CP-25 alleviates antigen-induced experimental Sjögren's syndrome in mice by inhibiting JAK1-STAT1/2-CXCL13 signaling and interfering with B-cell migration. *Lab. Invest.* E-published.
- Wedenoja, S., et al. 2020. Fetal HLA-G mediated immune tolerance and interferon response in preeclampsia. *EBioMedicine.* E-published.

STORAGE

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