SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-α (FL-189): sc-20106

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.

CHROMOSOMAL LOCATION

Genetic locus: IFNA1/IFNA13/IFNA5/IFNA6/IFNA14/IFNA21 (human) mapping to 9p21.3.

SOURCE

IFN-α (FL-189) is a rabbit polyclonal antibody raised against amino acids 1-189 mapping raised against full-length recombinant IFN-α13 of human origin of IFN-13 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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.

APPLICATIONS

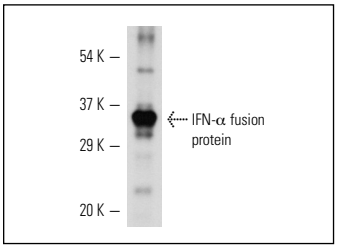
IFN-α (FL-189) is recommended for detection of IFN-α1 and 13, and to a lesser extent, IFN-α5, 6, 14 and 21 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (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 IFN-α2, 4, 7, 8, 10, 16 and 17.

Molecular Weight of IFN-α: 19 kDa.

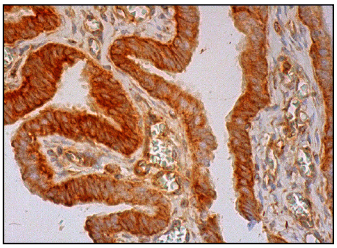
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



IFN-α (FL-189): sc-20106. Western blot analysis of human recombinant IFN-α fusion protein.



IFN-α (FL-189): sc-20106. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Zheng, L., et al. 2009. Association between IFN-α and primary Sjogren's syndrome. Oral Surg. Oral Med. Oral Pathol. Oral Radiol. Endod. 107: e12-e18.
2. Roelofs, M.F., et al. 2009. Type I interferons might form the link between Toll-like receptor (TLR) 3/7 and TLR4-mediated synovial inflammation in rheumatoid arthritis (RA). Ann. Rheum. Dis. 68: 1486-1493.
3. Zhang, Y., et al. 2013. The influence of cathelicidin LL37 in human anti-neutrophils cytoplasmic antibody (ANCA)-associated vasculitis. Arthritis Res. Ther. 15: R161.

PROTOCOLS

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