

IFN- β (FL-187): sc-20107

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 anti-viral activity. IFN- α and - β exert a variety of other biological effects, including anti-tumor 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

1. Adolf, G.R. 1987. Antigenic structure of human interferon- ω 1 (IFN- 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 IFN- α 7, IFN- α 14, and IFN- 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 IFN- α , IFN- β and IFN- 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.

CHROMOSOMAL LOCATION

Genetic locus: IFNB1 (human) mapping to 9p21.3.

SOURCE

IFN- β (FL-187) is a rabbit polyclonal antibody raised against amino acids 1-187 representing full length IFN- β of human origin.

PRODUCT

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

APPLICATIONS

IFN- β (FL-187) is recommended for detection of IFN- β of human origin by Western Blotting (starting dilution 1:200, 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).

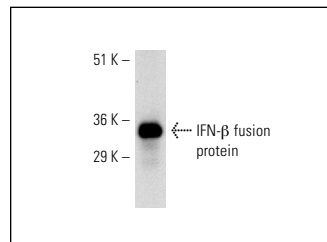
Suitable for use as control antibody for IFN- β siRNA (h): sc-39603, IFN- β shRNA Plasmid (h): sc-39603-SH and IFN- β shRNA (h) Lentiviral Particles: sc-39603-V.

Molecular Weight of IFN- β : 20 kDa.

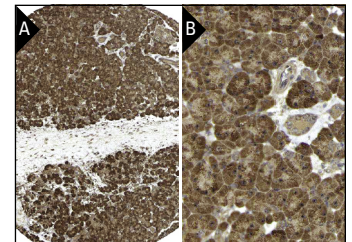
RECOMMENDED SECONDARY REAGENTS

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- β (FL-187): sc-20107. Western blot analysis of human recombinant IFN- β fusion protein.



IFN- β (FL-187): sc-20107. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine pancreas and islet cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. de Carvalho Vivarini, A., et al. 2011. Human cutaneous leishmaniasis: interferon-dependent expression of double-stranded RNA-dependent protein kinase (PKR) via TLR2. *FASEB J.* 25: 4162-4173.
2. Yamaguchi, K., et al. 2011. Ultrasound-mediated interferon β gene transfection inhibits growth of malignant melanoma. *Biochem. Biophys. Res. Commun.* 411: 137-142.

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.



Try IFN- β (A1): sc-53968 or IFN- β (NYRhIFN- β): sc-73302, our highly recommended monoclonal alternatives to IFN- β (FL-187).