

IFN- γ (E-10): sc-373727

BACKGROUND

Interferon (IFN)- γ is an antiviral and antiparasitic agent produced by CD4⁺/CD8⁺ lymphocytes and natural killer cells that undergo activation by antigens, mitogens or alloantigens. IFN- γ production modulates T cell growth and differentiation and inhibits the growth of B cells. Synthesis of IFN- γ is inducible by IL-2, FGF and EGF. The active form of IFN- γ is a homodimer with each subunit containing six helices. The dimeric structure of human IFN- γ is stabilized by non-covalent interactions through the interface of the helices. IFN- γ translated precursor is 166 amino acids, including the 23 amino acid secretory sequence. Multiple forms exist due to variable glycosylation and under non-denaturing conditions due to dimers and tetramers.

CHROMOSOMAL LOCATION

Genetic locus: IFNG (human) mapping to 12q15.

SOURCE

IFN- γ (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 25-50 at the N-terminus of IFN- γ of human origin.

PRODUCT

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

IFN- γ (E-10) is available conjugated to agarose (sc-373727 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373727 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373727 PE), fluorescein (sc-373727 FITC), Alexa Fluor[®] 488 (sc-373727 AF488), Alexa Fluor[®] 546 (sc-373727 AF546), Alexa Fluor[®] 594 (sc-373727 AF594) or Alexa Fluor[®] 647 (sc-373727 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-373727 AF680) or Alexa Fluor[®] 790 (sc-373727 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373727 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

IFN- γ (E-10) is recommended for detection of precursor and mature IFN- γ 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IFN- γ siRNA (h): sc-39606, IFN- γ shRNA Plasmid (h): sc-39606-SH and IFN- γ shRNA (h) Lentiviral Particles: sc-39606-V.

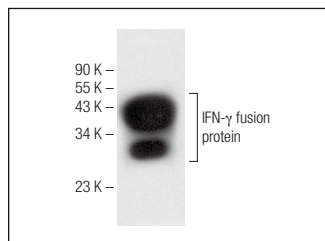
Molecular Weight of IFN- γ : 20-25 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or AML-193 whole cell lysate: sc-364182.

STORAGE

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

DATA



IFN- γ (E-10): sc-373727. Western blot analysis of human recombinant IFN- γ fusion protein.

SELECT PRODUCT CITATIONS

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- Cho, B.J., et al. 2019. Rapamycin rescues endoplasmic reticulum stress-induced dry eye syndrome in mice. *Invest. Ophthalmol. Vis. Sci.* 60: 1254-1264.
- Kerner, G., et al. 2020. Inherited human IFN- γ deficiency underlies mycobacterial disease. *J. Clin. Invest.* 130: 3158-3171.
- Pan, H., et al. 2021. DYNC1H1 regulates NSCLC cell growth and metastasis by IFN- γ -JAK-Stat signaling and is associated with an aberrant immune response. *Exp. Cell Res.* 409: 112897.
- Sánchez-Garibay, C., et al. 2022. *Mycobacterium tuberculosis* infection induces BCSFB disruption but no BBB disruption *in vivo*: implications in the pathophysiology of tuberculous meningitis. *Int. J. Mol. Sci.* 23: 6436.
- Iqbal, H., et al. 2022. Pep27 mutant immunization inhibits caspase-14 expression to alleviate inflammatory bowel disease via treg upregulation. *Microorganisms* 10: 1871.
- AlZahrani, S., et al. 2022. Anti-inflammatory effect of specialized pro-resolving lipid mediators on mesenchymal stem cells: an *in vitro* study. *Cells* 12: 122.
- Strohmeier, V., et al. 2023. Interferon-driven immune dysregulation in common variable immunodeficiency-associated villous atrophy and norovirus infection. *J. Clin. Immunol.* 43: 371-390.
- Lu, L., et al. 2023. MicroRNA Let-7i regulates innate TLR4 pathways in peripheral blood mononuclear cells of patients with ankylosing spondylitis. *Int. J. Gen. Med.* 16: 1393-1401.

RESEARCH USE

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