Active Interferon Gamma (IFNg)

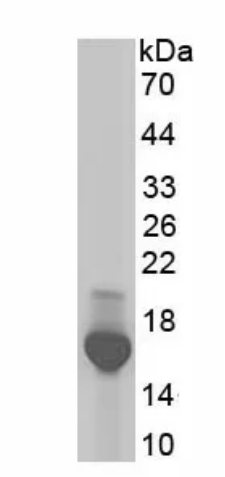
Catalog#:PER12076

概述（Summary）

别称（Alternative Names）	IFN-G; IFG; IFI; INFr; IFN, Immune Interferon
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Gln23-Cys156】
Accession #	P01581
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	16.8 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Type II interferon produced by immune cells such as T-cells and NK cells that plays crucial roles in antimicrobial, antiviral, and antitumor responses by activating effector immune cells and enhancing antigen presentation. Primarily signals through the JAK-STAT pathway after interaction with its receptor IFNGR1 to affect gene regulation. Upon IFNG binding, IFNGR1 intracellular domain opens out to allow association of downstream signaling components JAK2, JAK1 and STAT1, leading to STAT1 activation, nuclear translocation and transcription of IFNG-regulated genes. Many of the induced genes are transcription factors such as IRF1 that are able to further drive regulation of a next wave of transcription.

Plays a role in class I antigen presentation pathway by inducing a replacement of catalytic proteasome subunits with immunoproteasome subunits. In turn, increases the quantity, quality, and repertoire of peptides for class I MHC loading. Increases the efficiency of peptide generation also by inducing the expression of activator PA28 that associates with the proteasome and alters its proteolytic cleavage preference. Up-regulates as well MHC II complexes on the cell surface by promoting expression of several key molecules such as cathepsins B/CTSB, H/CTSH, and L/CTSL. Participates in the regulation of hematopoietic stem cells during development and under homeostatic conditions by affecting their development, quiescence, and differentiation.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

Table 1. ELISA detection of iNOS expression from RAW 246.7 cells stimulated by IFNg.

Sample (cell lysates of Raw 264.7 cells)	O.D. value	Corrected	Concentration of iNOS (ng/mL)
stimulated with IFN-γ (10ng/mL)	3.31	3.22	40.97
unstimulated	0.37	0.28	3.66

Interferon gamma (IFNγ) is a dimerized soluble cytokine that is the only member of the type II class of interferons. The importance of IFNγ in the immune system stems in part from its ability to inhibit viral replication directly, and most importantly from its immunostimulatory and immunomodulatory effects. It has been reported that IFN-γ promotes production of inducible Nitric Oxide Synthase (iNOS) in macrophages as an important activator. After stimulated with IFN-γ, morphological changes will occur in murine macrophage cell line (Raw 264.7 cells), and inducible nitric-oxide synthase (iNOS) in the cells will increase. Raw 264.7 cells were incubated in DMEM with IFN-γ (10ng/mL) for 24h, then cells were observed by inverted microscope and iNOS in cell lysates was detected by ELISA. Effect of IFN-γ on morphological change of Raw 246.7 cells was shown in Figure 1. Effect of IFN-γ on the expression of iNOS was shown in Table 1.



A B

Figure 1. Morphological change of Raw 264.7cells after stimulation of IFNg.

(A) Raw 264.7 cells cultured in DMEM, stimulated with IFNg;

(B) Unstimulated Raw 264.7 cells cultured in DMEM (negative control).

注意事项（Note）

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