

APA049Gu01 100µg
Active Interferon Gamma (IFNγ)
Organism Species: Cavia (Guinea pig)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Gln24~Lys166

Tags: N-terminal His-tag

Purity: >92%

Buffer Formulation: 10mM PBS, pH7.4, containing 1mM DTT, 5% trehalose and 0.01% sarcosyl.

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 9.7

Predicted Molecular Mass: 18.2kDa

Accurate Molecular Mass: 18kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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QSRFTNE IRILKNYFNA DNSDVGDNQT  
LFGVILKNCQ EESERKIFQS QIVSFYFKLF EKHFTDNQTV QNSMNTIKEQ  
IITKFFKDNS SNKVQAFKNL IQISVNDEHV QRQAIIEELKK VIDDLSPNQR  
KRRRTQMLFQ SRRASK
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[ACTIVITY]

Interferon gamma (IFN γ) is a dimerized soluble cytokine that is the only member of the type II class of interferons. The importance of IFN γ 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.

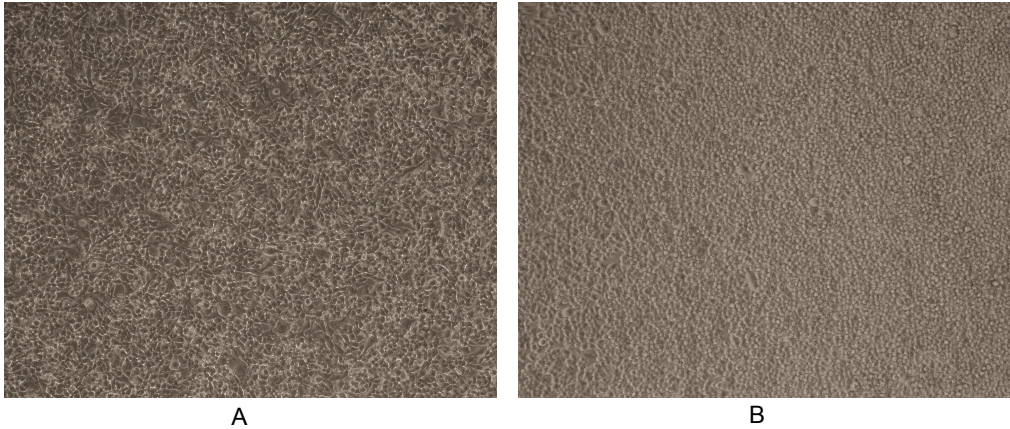


Figure 1. Morphological change of Raw 264.7 cells after stimulation of IFN γ .

- (A) Raw 264.7 cells cultured in DMEM, stimulated with IFN γ ;**
- (B) Unstimulated Raw 264.7 cells cultured in DMEM (negative control).**

Effect of IFN- γ on the expression of iNOS was shown in Table 1.

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

Sample (cell lysates of Raw 264.7 cells)	O.D. value	Corrected	Concentration of iNOS (ng/mL)
stimulated with IFN- γ (10ng/mL)	2.81	2.69	36.92
unstimulated	0.25	0.19	2.88

[IDENTIFICATION]

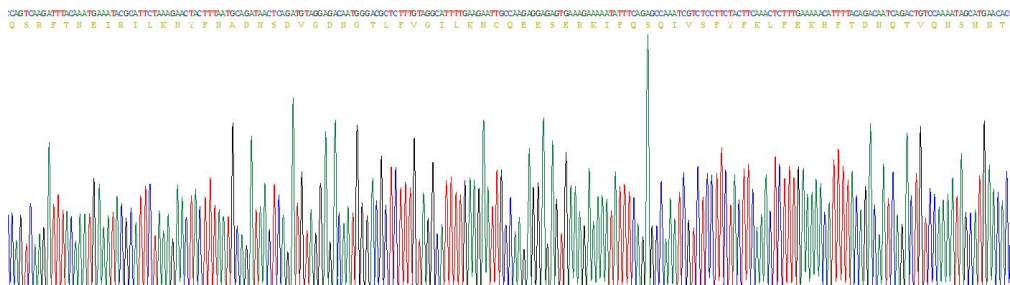


Figure 2. Gene Sequencing (extract)

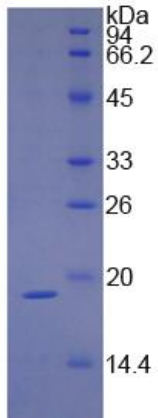


Figure 3. SDS-PAGE

Sample: Active recombinant IFN γ , Cavia

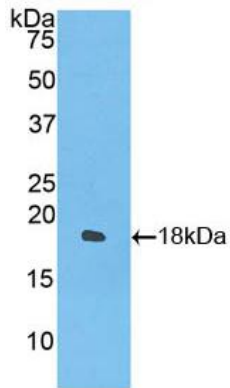


Figure 4. Western Blot

Sample: Recombinant IFN γ , Cavia;

Antibody: Rabbit Anti-Cavia IFN γ Ab (PAA049Gu01)