

APA179Mu61 100µg
Active Interferon Alpha 2 (IFNα2)
Organism Species: *Mus musculus (Mouse)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.

Host: 293F cell

Residues: Cys21~Lys186

Tags: N-terminal His-tag

Purity: >95%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 9.0

Predicted Molecular Mass: 21.0kDa

Accurate Molecular Mass: 25&20kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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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CDLPHTYNLR NKRALKVLAQ MRRLPFLSCL  
KDRQDFGFPL EKVDNQQIQK AQAIPVLRDL TQQLNLFST KASSAAWNAT  
LLDSFCNDLH QQLNDLQTCL MQQVGVQEP L TQEDALLAV RKYFHRITVY  
LREKKHSPCA WEVVRAEVWR ALSSSVNLLP RLSEEK
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[ACTIVITY]

Interferon-alpha 2 (IFN alpha -2), one of 14 subtypes within the IFN-alpha class of Type I Interferons, was the first to be cloned in the early eighties. The size of the mature IFN α 2 is thus 165 amino acids, which is one amino acid shorter than all other human IFN α subtypes. And it is Produced by macrophages, IFN-alpha have antiviral activities and is involved in cytokine storm inflammatory response. Janus Kinase 1 (JAK1), a kind of tyrosine kinase of the non-receptor type, is involved in the IFN-alpha/beta/gamma signal pathway. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse IFN α 2 and recombinant human JAK1. Briefly, IFN α 2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to JAK1-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST and incubated for 1h with anti- IFN α 2 pAb, then aspirated and washed

3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C , wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C . Finally, add 50 µL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant mouse IFN α 2 and recombinant human JAK1 was shown in Figure 1, and this effect was in a dose dependent manner.

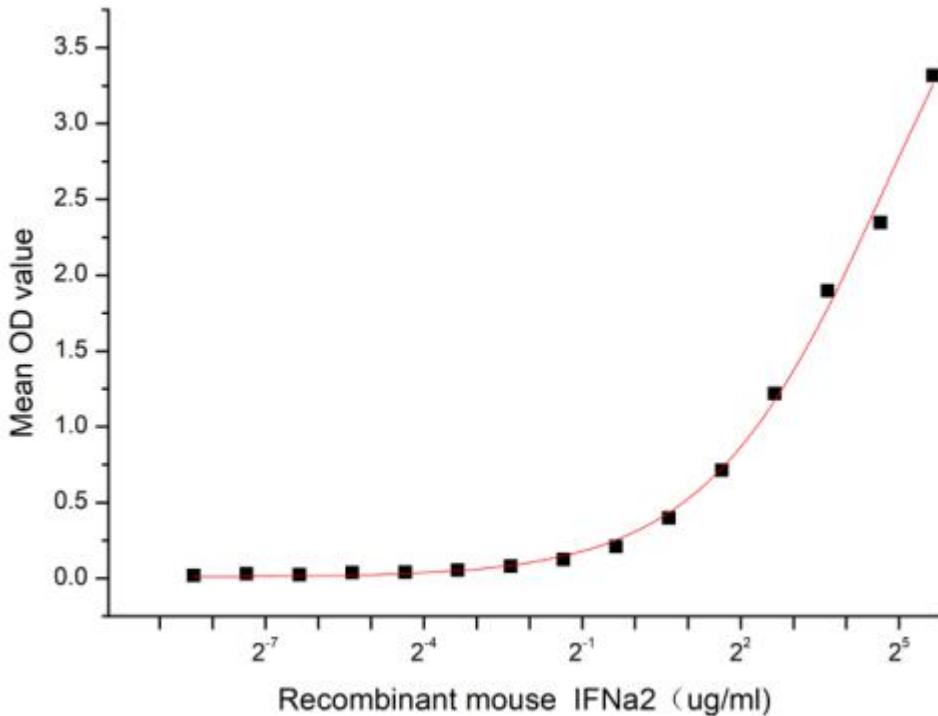


Figure 1. The binding activity of recombinant mouse IFN α 2 and recombinant human JAK1

[IDENTIFICATION]

ITGSGAVCTDLDLQAGICTTAMACTGQGSWQAGVSSDCTTGWQSTCTGSCGAGTGGAGAGCTDCTCTTCCTCTGCTGAGGSLGGSDGGACTTGGATTCCCTGGGAGGGGATMAGDGGGATGSGGCTGAGDQDCTCTGCTGCTGGAGCTTACTAGAGGCTTGAGCCCTTGCATGAGGCTTATGCTGCTGGAGTGC
 CDILPHTYNLRNKRALKVLAQHRRLPFISCLKDRDQDFGFPLEKVDNQOIQKAQAIPVLRDLTQOTLNLFTSKASSAAVNA

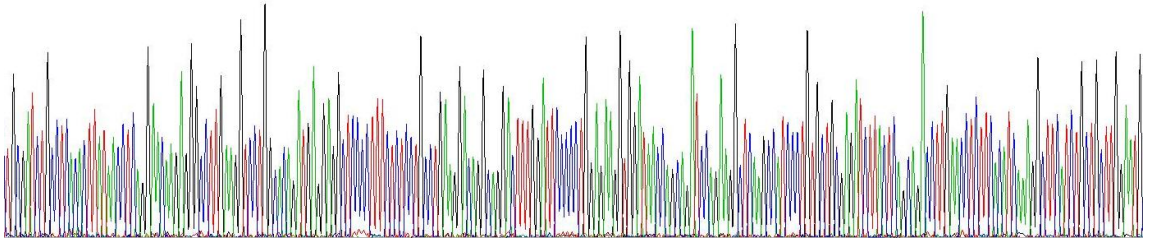


Figure 2. Gene Sequencing (extract)

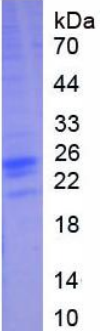


Figure 3. SDS-PAGE

Sample: Active recombinant IFNa2, Mouse

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.