APA033Ra01 100μg
Active Interferon Alpha (IFNa)
Organism Species: *Rattus norvegicus (Rat)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Cys24~Ser192
Tags: N-terminal His-tag
Purity: >98%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 8.3
Predicted Molecular Mass: 23.1kDa
Accurate Molecular Mass: 23kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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 37ºC 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]

CDLPHTH NLRNKRVFTL LAQMRRLSPV
SCLKDRKYFG FPLEKVDGQQ IQKAQAIPVL HELTQQILSL FTSKESSTAW
DATLLDSFCN DLQQQLSGLQ ACLMQQVGVQ ESPLTQEDSL LAVREYFHRI
TVYLRENKHS PCAWEVVKAE VWRALSSSAN LMGRLREERN ES

[ACTIVITY]

Interferon Alpha (IFNa) belongs to a large subgroup of interferon proteins that help regulate the activity of the immune system. The IFNa proteins are produced by leukocytes. They are mainly involved in innate immune response against viral infection. It is also made synthetically as medication in hairy cell leukemia. Besides, Interferon Alpha/Beta Receptor 1 (IFNa/bR1) has been identified as an interactor of IFNa, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat IFNa and recombinant rat IFNa/bR1. Briefly, IFNa were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to IFNa/bR1-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-IFNa pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of IFNa and IFNa/bR1 was shown in Figure 1, and this effect was in a dose dependent manner.

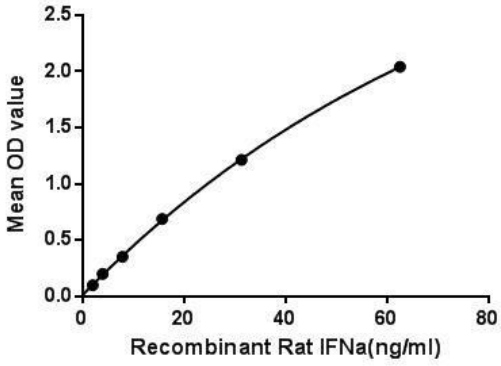

Figure 1. The binding activity of IFNa with IFNa/bR1.

[IDENTIFICATION]

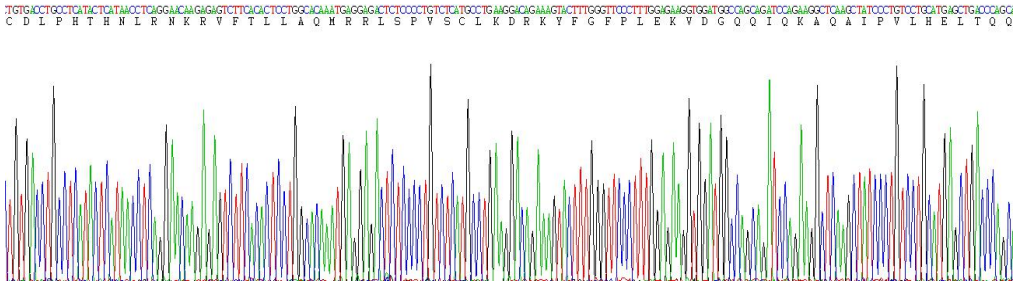

Figure 2. Gene Sequencing (extract)

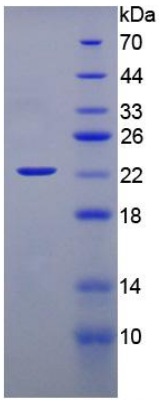

Figure 3. SDS-PAGE

Sample: Active recombinant IFNa, Rat

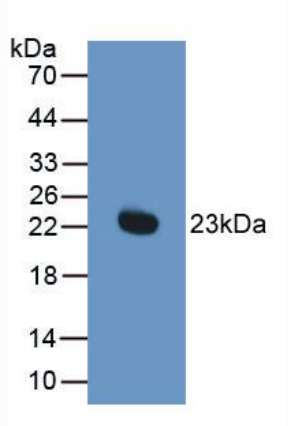

Figure 4. Western Blot

Sample: Recombinant IFNa, Rat;

Antibody: Rabbit Anti-Rat IFNa Ab (PAA033Ra01)

[IMPORTANT NOTE]

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