

**APL627Hu61 100µg**  
**Active Interferon Gamma Receptor 2 (IFNγR2)**  
**Organism Species: *Homo sapiens* (Human)**  
***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:** Met1~Gln247

**Tags:** N-terminal His-tag

**Purity:** >90%

**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:** 6.7

**Predicted Molecular Mass:** 29.2kDa

**Accurate Molecular Mass:** 40kDa 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.

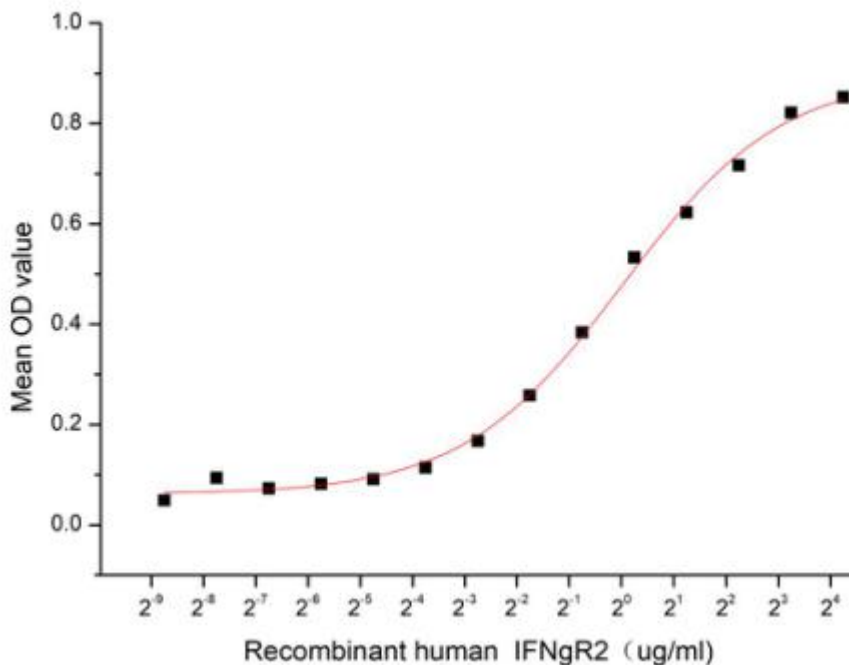
## **[ SEQUENCE ]**

```
MRPTLLWSLLLLLVFAAAAAAPPDPLSQLPAPQHPKIRLYNAEQVLSWEPVALSNSTRPVVYQVQFKY
TDSKWFTADIMSIGVNCTQITATECDFTAASPSAGFPMDFNVTLRRLRAELGALHSAWVTMPWFQHYRNV
TVGPPENIEVTPGEGSLIIRFSSPFDIADTSTAFFCYVHYWEKGGIQQVKGPPFRSNSISLDNLKPSRV
YCLQVQAQLLWNKSNIFRVGHLNISCYETMADASTELQQ
```

## **[ ACTIVITY ]**

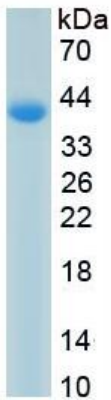
IFN- $\gamma$  R2 (Interferon  $\gamma$  receptor 2; also called IFN- $\gamma$  R beta IFN- $\gamma$  RII, or AF1) is a 60-64 kDa type I transmembrane glycoprotein that is a member of the class II cytokine receptor family of molecule). It is highly expressed on the surfaces of myeloid cells, moderately expressed on B cells, and poorly expressed on the surfaces of T cells. IFN  $\gamma$  R2 is a cell-surface receptor that is required for interferon- $\gamma$  signalling and therefore plays a critical immunoregulatory role in innate and adaptive immunity against viral and also bacterial and protozoal infections. IFN $\gamma$ R2 have been confirmed to mediate down-stream JAK-STAT signaling pathway in mammals. It is widely expressed as part of a preassembled cell surface multimeric complex. In the absence of IFN- $\gamma$ , the complex contains two each of IFN- $\gamma$  R1, R2 and Jak1 molecules. Binding of IFN- $\gamma$  to IFN- $\gamma$  R1 recruits Jak2 to IFN- $\gamma$

R2 and initiates phosphorylation, STAT1 binding, conformational changes and transcriptional regulation, which mainly inhibits proliferation and/or promotes apoptosis. A functional binding ELISA assay was conducted to detect the interaction of recombinant human IFN $\gamma$ R2 and recombinant rat JAK2. Briefly, biotin-linked IFN $\gamma$ R2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to JAK2-coated microtiter wells and incubated for 1h at 37  $^{\circ}$ C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37  $^{\circ}$ C. Finally, add 50  $\mu$ l stop solution to the wells and read at 450 nm immediately. The binding activity of IFN $\gamma$ R2 and JAK2 was shown in Figure 1, the EC<sub>50</sub> for this effect is 1.02  $\mu$ g/mL.



**Figure 1. The binding activity of recombinant human IFN $\gamma$ R2 and recombinant rat JAK2**

**[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant IFNgR2, Human**

**[ 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.