

**APA050Hu01 100µg**  
**Active Active Insulin Like Growth Factor 1 (IGF1)**  
**Organism Species: *Homo sapiens* (Human)**  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1th Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Gly49~Ala118

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

**Purity:** >95%

**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:** 6.5

**Predicted Molecular Mass:** 37.7kDa

**Accurate Molecular Mass:** 40kDa 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 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.

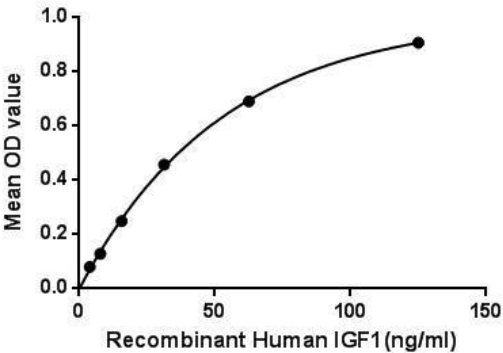
## **[ SEQUENCE ]**

ETLCGAELVD ALQFVCGDRG FYFNKPTGYG SSSRRAPQTG IVDECCFRSC  
DLRRLEMYCA PLKPAKSA GP

## **[ ACTIVITY ]**

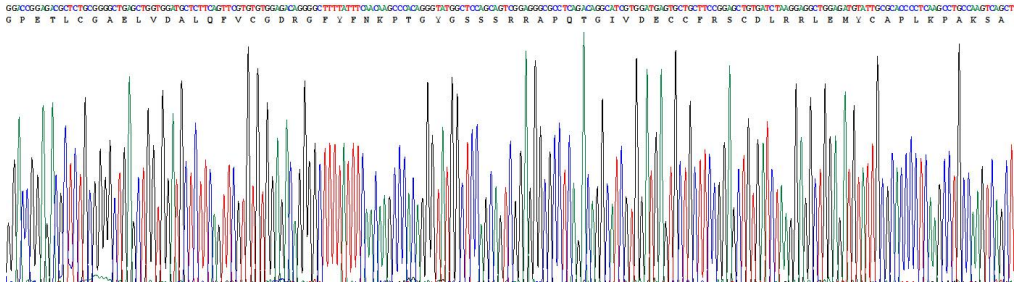
Insulin-like growth factor 1 (IGF1), also called somatomedin C, is a protein that in humans is encoded by the IGF1 gene. IGF1 is a hormone similar in molecular structure to insulin. It plays an important role in childhood growth and continues to have anabolic effects in adults. Its primary action is mediated by binding to its specific receptor, the insulin-like growth factor 1 receptor (IGF1R), which is present on many cell types in many tissues. IGF-1 is one of the most potent natural activators of the AKT signaling pathway, a stimulator of cell growth and proliferation, and a potent inhibitor of programmed cell death. Besides, Insulin Like Growth Factor 1 Receptor (IGF1R) has been identified as an interactor of IGF1, thus a binding ELISA assay was conducted to detect the interaction of recombinant human IGF1 and recombinant human IGF1R. Briefly, IGF1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to IGF1R-coated microtiter wells and incubated for 2h at 37 °C . Wells were washed with PBST and incubated for 1h with anti-IGF1 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°C. Finally, add 50µL stop

solution to the wells and read at 450nm immediately. The binding activity of IGF1 and IGF1R was shown in Figure 1, and this effect was in a dose dependent manner.

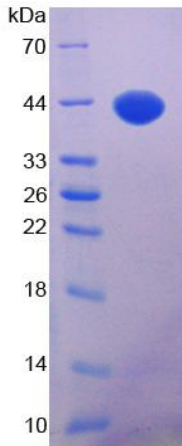


**Figure 1. The binding activity of IGF1 with IGF1R.**

**[ IDENTIFICATION ]**

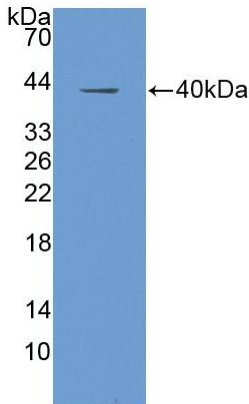


**Figure 2. Gene Sequencing (extract)**



**Figure 3. SDS-PAGE**

**Sample: Active recombinant IGF1, Human**



**Figure 4. Western Blot**

**Sample: Recombinant IGF1, Human;**

**Antibody: Rabbit Anti-Human IGF1 Ab (PAA050Hu01)**

### **[ 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.