

**APA124Mu01 100µg**  
**Active Transforming Growth Factor Beta 1 (TGFb1)**  
**Organism Species: *Mus musculus (Mouse)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Ala279~Ser390

**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:** 8.4

**Predicted Molecular Mass:** 14.1kDa

**Accurate Molecular Mass:** 16kDa 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.

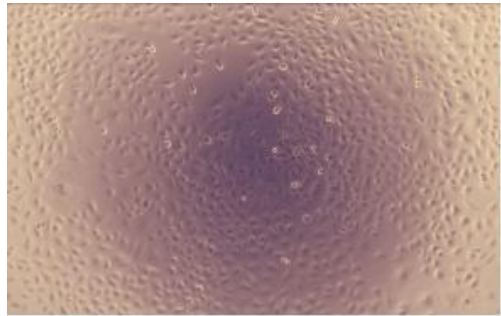
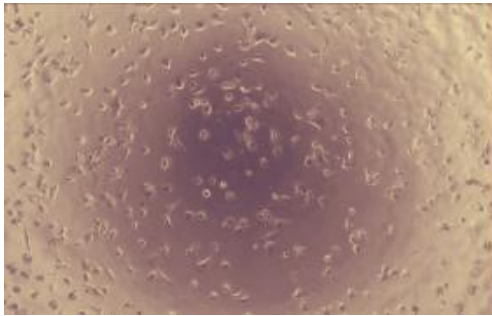
**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration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

## **[ SEQUENCE ]**

```
AL DTNYCFSSTE KNCCVRQLYI  
DFRKDLGKW IHEPKGYHAN FCLGPCPYIW SLDTQYSKVL ALYNQHNPQA  
SASPCCVPQA LEPLPIVYVYV GRKPKVEQLS NMIVRSCKCS
```

## **[ ACTIVITY ]**

Transforming growth factor beta 1 or TGF- $\beta$ 1 is a polypeptide member of the transforming growth factor beta superfamily of cytokines. It is a secreted protein that performs many cellular functions, including the control of cell growth, cell proliferation, cell differentiation, and apoptosis. To test the effect of TGF- $\beta$ 1 on cell apoptosis, A549 cells were seeded into 96-well plates at a density of 5,000 cells/well with 1% serum standard DMEM including various concentrations of recombinant mouse TGF- $\beta$ 1. After incubated for 48h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 $\mu$ L of CCK-8 solution was added to each well of the plate, then the absorbance at 450nm was measured using a microplate reader after incubating the plate for 2 hours at 37°C. Proliferation of A549 cells after incubation with TGF- $\beta$ 1 for 48h observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 assay after incubation with recombinant mouse TGF- $\beta$ 1 for 48h. The result was shown in Figure 2. It was obvious that TGF- $\beta$ 1 significantly inhibit cell viability of A549 cells. The ED50 is 7.1 $\mu$ g/mL.



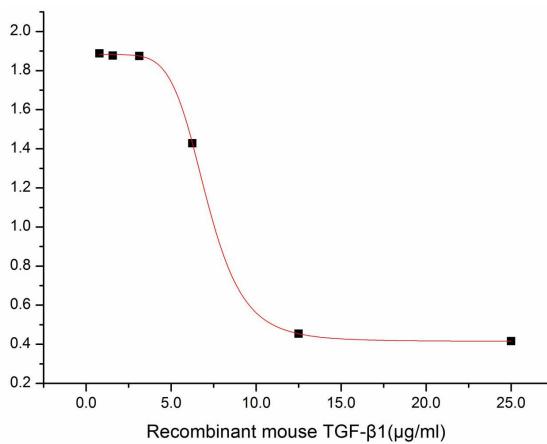
**A**

**B**

**Figure 1. Inhibition of A549 cells proliferation after stimulated with TGF- $\beta$ 1**

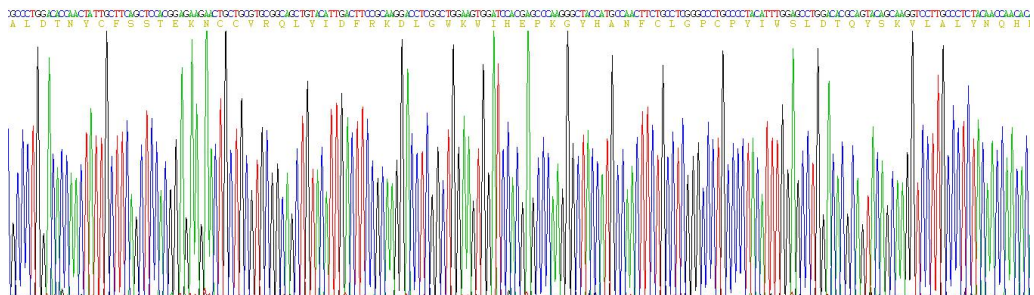
**(A) A549 cells cultured in DMEM, stimulated with 12.5 $\mu$ g/mL TGF- $\beta$ 1 for 48h;**

**(B) Unstimulated A549 cells cultured in DMEM for 48h.**

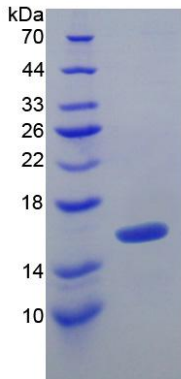


**Figure 2. Inhibition of A549 cells proliferation after stimulated with TGF- $\beta$ 1.**

**[ IDENTIFICATION ]**

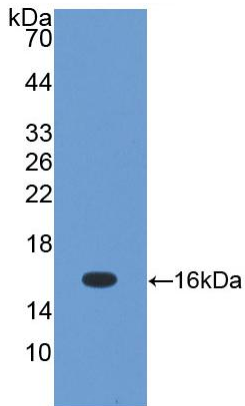


**Figure 3. Gene Sequencing (extract)**



**Figure 4. SDS-PAGE**

**Sample: Active recombinant TGFb1, Mouse**



**Figure 5. Western Blot**

**Sample: Recombinant TGFb1, Mouse;**

**Antibody: Rabbit Anti-Mouse TGFb1 Ab (PAA124Mu01)**

### **[ 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.