

**APA218Ga01 100µg**  
**Active Transforming Growth Factor Beta 2 (TGFβ2)**  
**Organism Species: *Chicken (Gallus)***  
***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:** Leu279~Ser412

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

**Purity:** >92%

**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:** 8.9

**Predicted Molecular Mass:** 19.1kDa

**Accurate Molecular Mass:** 19kDa 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.

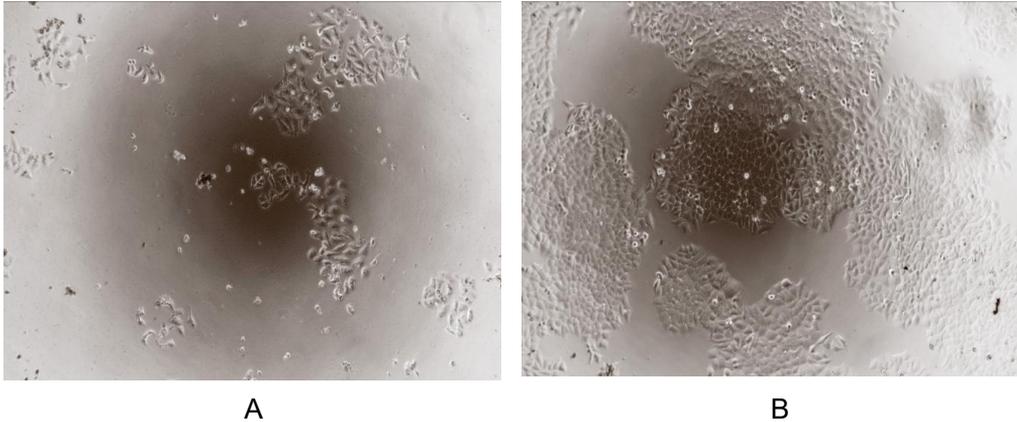
## **[ SEQUENCE ]**

LL LMLLPSYRLE SQQPSRRKKR  
ALDAAYCFRN VQDNCCLRPL YIDFKRDLGW KWIHEPKGYH ANFCAGACPY  
LWSSDTQHSR VLSLYNTINP EASASPCCVS QDLEPLTILY YIGKTPKIEQ  
LSNMIVKSCK CS

## **[ ACTIVITY ]**

Transforming growth factor beta (TGF- $\beta$ ) is a multifunctional cytokine belonging to the transforming growth factor superfamily. The TGF- $\beta$  superfamily includes endogenous growth inhibiting proteins; an increase in expression of TGF- $\beta$  often correlates with the malignancy of many cancers and a defect in the cellular growth inhibition response to TGF- $\beta$ . Its immunosuppressive functions then come to dominate, contributing to oncogenesis. To test the effect of TGF- $\beta$  on inhibit HGF-dependent proliferation, HepG2 cells were seeded into triplicate wells of 96-well plates at a density of 2,000 cells/well and allowed to attach, replaced with serum-free overnight, then the medium was replaced with 2% serum standard DMEM including 1ng/mL HGF prior to the addition of various concentrations of recombinant chicken TGF- $\beta$ . After incubated for 96h, 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 1-4 hours at 37°C. The inhibitory effect of TGF- $\beta$  on HGF-dependent proliferation of HepG2 cells observed by inverted microscope was

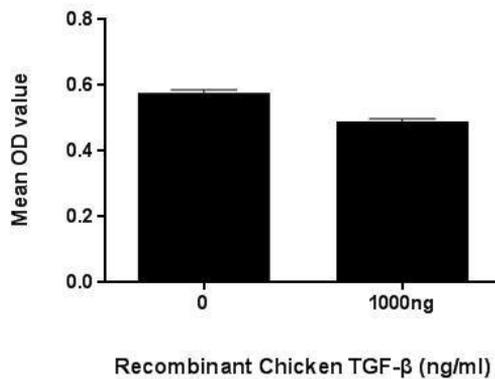
shown in Figure 1. Cell viability was assessed by CCK-8 assay after incubation with recombinant TGF- $\beta$  for 96h. The result was shown in Figure 2. It was obvious that TGF- $\beta$  significantly decreased cell viability of HepG2 cells.



**Figure 1. The inhibitory effect of TGF- $\beta$  on cell proliferation of HepG2 cells.**

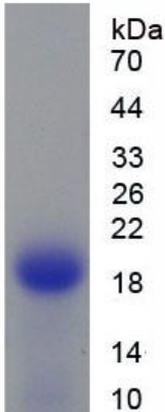
**(A) HepG2 cells cultured in DMEM, stimulated with 1 $\mu$ g/mL TGF- $\beta$  for 96h;**

**(B) Unstimulated HepG2 cells cultured in DMEM for 96h.**



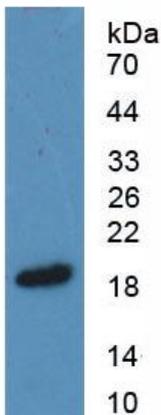
**Figure 2. TGF- $\beta$  inhibit cell proliferation of HepG2 cells.**

**[ IDENTIFICATION ]**



**Figure 3. SDS-PAGE**

**Sample: Active recombinant TGFb2, Gallus**



**Figure 4. Western Blot**

**Sample: Recombinant TGFb2, Gallus;**

**Antibody: Rabbit Anti-Gallus TGFb2 Ab (PAA218Ga01)**

**[ 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.