APA124Bo01 100μg
Active Transforming Growth Factor Beta 1 (TGFb1)
Organism Species: *Bos taurus; Bovine (Cattle)*
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: Ala279~Ser390
Tags: N-terminal His and GST Tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 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: 7.2
Predicted Molecular Mass: 42.8kDa
Accurate Molecular Mass: 45kDa as determined by SDS-PAGE reducing conditions.

[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.

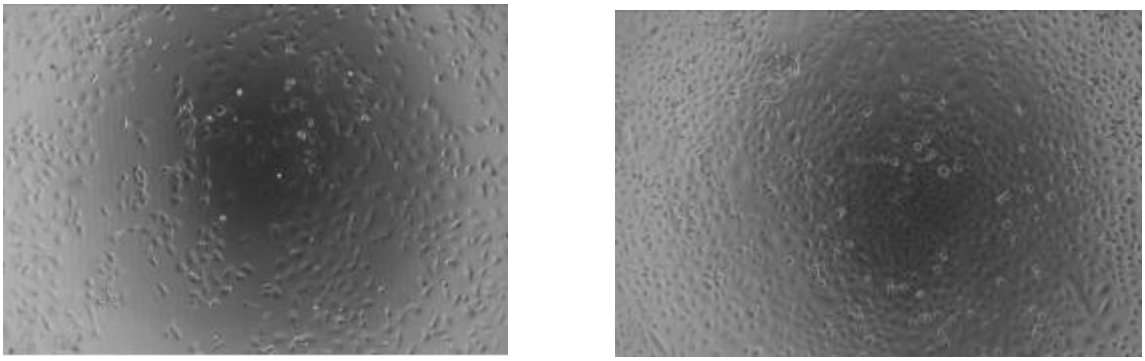
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date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

[SEQUENCE]

AL DTNYCFSSTE KNCCVRQLYI
DFRKDLGWKW IHEPKGYHAN FCLGPCPYIW SLDTQYSKVL ALYNQHNPGA
SAAPCCVPQA LEPLPIVYYV GRKPKVEQLS NMIVRSCKCS

[ACTIVITY]

Transforming growth factor beta 1 (TGF-β1) 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. It is reported that TGF-β1 can stimulate cell transformation by Smad signal transduction .To test the bioactivity of TGF-β1, A549 cells were seeded into 24-well plate at a density of $1x10^6$ cells/mL, and allowed to attach overnight before treated with certain concentrations of TGF-β1. After 48 hours, the morphological changes of A549 were observed by inverted microscope. The results was shown in Figure 1. A549 cells usually have a cobblestone epithelial morphology and corresponding growth pattern. When stimulated with TGF-β1, the cells were similar with fibroblasts, the connections between cells became loose.



A B

Figure 1.The morphological characteristics of A549 cells after stimulated with TGF-β1

(A) A549 cells cultured in DMEM, stimulated with 5.0 μg/mL TGF-β1 for 48h;

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

[IDENTIFICATION]

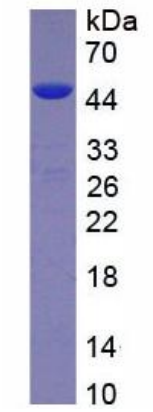


Figure 2. SDS-PAGE

Sample: Active recombinant TGFb1, Cattle

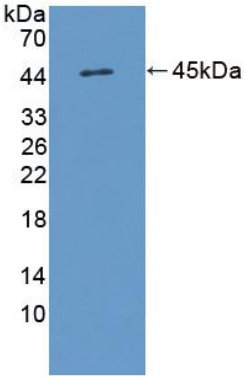


Figure 3. Western Blot

Sample: Recombinant TGFb1, Cattle;

Antibody: Rabbit Anti- Cattle TGFb1 Ab (PAA124Bo01)

[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.