APA134Hu01 100μg
Active Tumor Necrosis Factor Beta (TNFb)
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: Prokaryotic expression.
Host: *E. coli*
Residues: Pro36~Leu205
Tags: N-terminal His-tag
Purity: >98%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5% Trehalose .
Original Concentration: 300μg/mL
Applications: Cell culture; Activity Assays; In vivo assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 9.3
Predicted Molecular Mass: 22.2kDa
Accurate Molecular Mass: 22kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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.

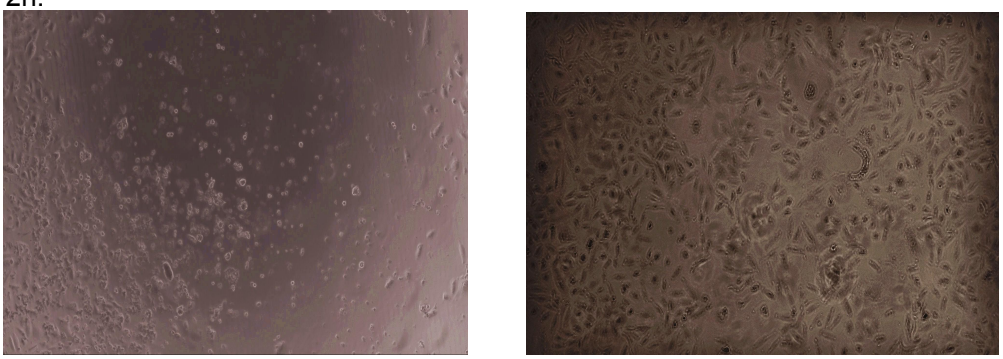
[SEQUENCE]

PGVGL TPSAAQTARQ
HPKMHLAHST LKPAAHLIGD PSKQNSLLWR ANTDRAFLQD GFSLSNNSLL
VPTSGIYFVY SQVVFSGKAY SPKATSSPLY LAHEVQLFSS QYPFHVPLLS
SQKMVYPGLQ EPWLHSMYHG AAFQLTQGDQ LSTHTDGIPH LVLSPSTVFF
GAFAL

[ACTIVITY]

Mechanism: TNF-β, a member of the tumor necrosis factor family, is a potent lymphoid factor that exerts cytotoxic effects on a wide range of tumor cells. The biological effects of TNF-β are very similar to TNF-α, due to the similarity of molecular structure and the receptors. As reported, TNF-α could inhibit the proliferation and induce apoptosis of A549 cells, and the concentration of IL-1β in cell supernatant will increase after stimulation. Therefore, A549 cells were incubated in DMEM with TNF-β (10ng/mL) for 8h, 24h, 48h, 72h, then cells were observed by inverted microscope and IL-1β was detected in the cell supernatant by ELISA .

Results 1: Cell apoptosis was observed after incubation with TNF-β (10ng/mL) for 72h.



A B

Figure 1. Effect of TNF-β on A549 cells.

(A) A549 cells cultured in DMEM, stimulated with 10ng/mL TNF-β for 72h;

(B) A549 cells cultured in DMEM for 72h.

Results 2: After incubation with TNF-β (10ng/mL) for 8h, IL-1β significantly increased in the cell supernatant.

Table 1. Effect of TNF-β on A549 cells by ELISA.

Sample (cell supernatant of A549 cells)	O.D. value	Corrected	Concentration of IL-1β (ng/mL)
Stimulated with TNF-β (10ng/mL)	2.163	1.999	95.9
Unstimulated	0.187	0.023	4.9

[IDENTIFICATION]

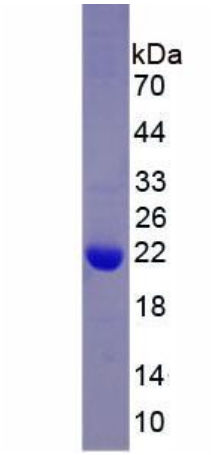


Figure 2. SDS-PAGE

Sample: Active recombinant TNFb, 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.