

APA133Hu01 100µg
Active Tumor Necrosis Factor Alpha (TNFa)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1th Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Val77~Leu233

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; In vivo assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 7.0

Predicted Molecular Mass: 21.0kDa

Accurate Molecular Mass: 21kDa 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]

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VRSS  SRTPSDKPVA  HVVANPQAEG
QLQWLNRRAN  ALLANGVELR  DNQLVVPSEG  LYLIYSQVLF  KGQGCPSTHV
LLTHTISRIA  VSYQTKVNLL  SAIKSPCQRE  TPEGAEAKPW  YEPIYLGGVF
QLEKGDRLSA  EINRPDYLDF  AESGQVYFGI  IAL
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[ACTIVITY]

TNF α (Tumor necrosis factor), is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It has been reported that TNF α can inhibit the proliferation and induce apoptosis of A549 cells, besides, the concentration of IL-1 β and IL-8 in cell supernatant will increase after stimulation. Therefore, a stimulation assay of TNF α was conducted using A549 cells. Briefly, A549 cells were incubated in DMEM with different concentrations of TNF α (1ng/mL, 10ng/mL, 100ng/mL, 1000ng/mL) for 8h, after which the concentration of IL-1 β and IL-8 in the cell supernatant were detected by ELISA. IL-1 β and IL-8 levels in the cell supernatant of A549 cells increased significantly after stimulated with IL-1 β , the data was shown in Figure 1 and Figure 2 separately.

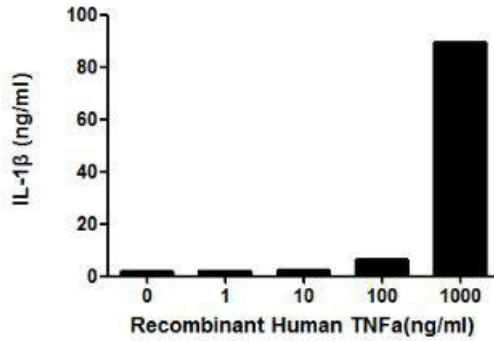


Figure 1. IL-1β level in the cell supernatant of A549 cells up-regulated by TNFα.

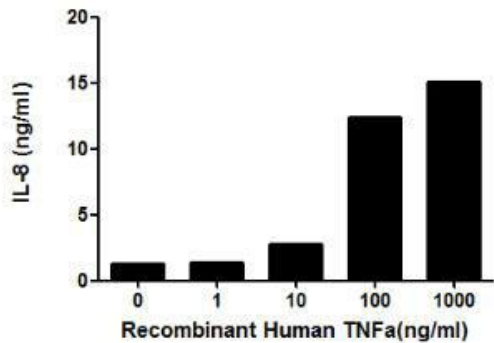


Figure 2. IL-8 level in the cell supernatant of A549 cells up-regulated by TNFα.

[IDENTIFICATION]

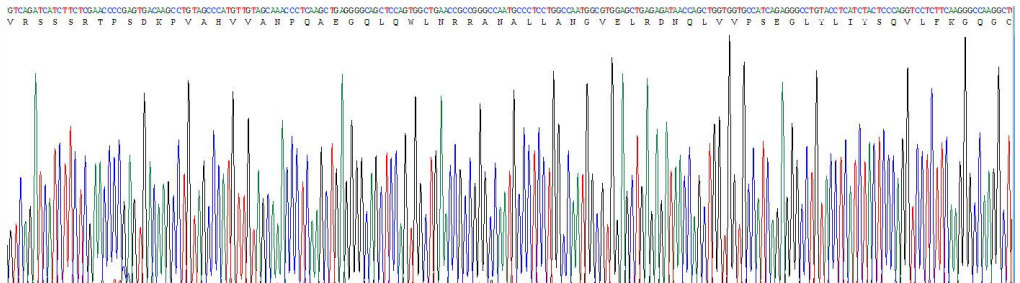


Figure 3. Gene Sequencing (extract)

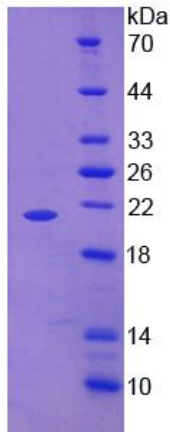


Figure 4. SDS-PAGE

Sample: Active recombinant TNF α , Human

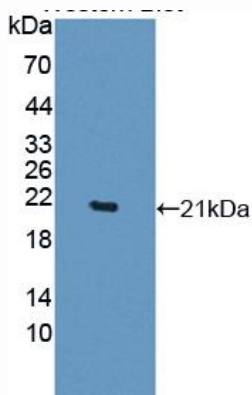


Figure 5. Western Blot

Sample: Recombinant TNF α , Human;

Antibody: Rabbit Anti-Human TNF α Ab (PAA133Hu01)