APA133Ra01 5μg

Active Tumor Necrosis Factor Alpha (TNFa)

Organism Species: *Rattus norvegicus (Rat)*

Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Leu80~Leu235

Tags: N-terminal His-tag

Purity: >92%

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% sarcosyl, 5% trehalose, and Proclin300.

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 6.0

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 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]

L RSSSQNSSDK PVAHVVANHQ
AEEQLEWLSQ RANALLANGM DLKDNQLVVP ADGLYLIYSQ VLFKGQGCPD
YVLLTHTVSR FAISYQEKVS LLSAIKSPCP KDTPEGAELK PWYEPMYLGG
VFQLEKGDLL SAEVNLPKYL DITESGQVYF GVIAL

[ACTIVITY]

Mechanism: TNFa, being an endogenous pyrogen, is able to induce fever, apoptotic cell death, inflammation and to inhibit tumorigenesis. As reported, TNFa could inhibit the proliferation and induce apoptosis of A549 cells, and the concentration of IL-1β and IL-8 in cell supernatant will increase after stimulation. Therefore, A549 cells were incubated in DMEM with TNFa (1ng/mL, 10ng/mL, 100ng/mL, 1000ng/mL) for 8h, IL-1β and IL-8 were detected in the cell supernatant by ELISA.

Results: After incubation with TNF-a for 8h, IL-1β and IL-8 significantly increased in the cell supernatant. The concentration of IL-1β and IL-8 detected in the cell supernatant was shown in Figure 1 and Figure 2 respectively.

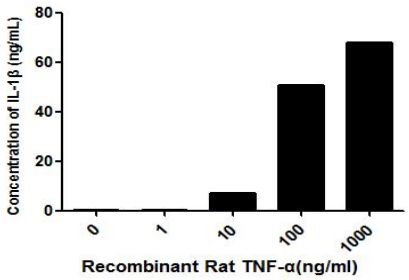

Figure 1. The concentration of IL-1β in the cell supernatant of A549 cells stimulated by TNF-α.

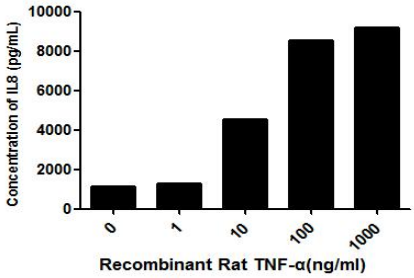

Figure 2. The concentration of IL-8 in the cell supernatant of A549 cells stimulated by TNF-α.

[IDENTIFICATION]

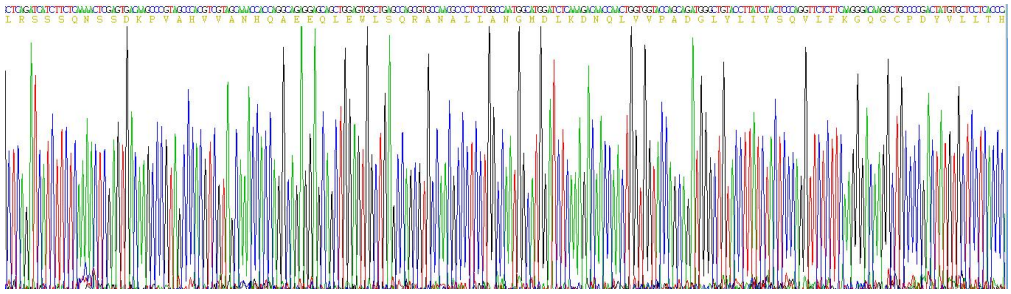

Figure 3. Gene Sequencing (extract)

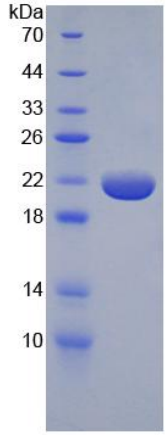

Figure 4. SDS-PAGE

Sample: Active recombinant TNFa, Rat

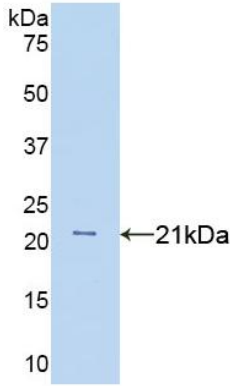

Figure 5. Western Blot

Sample: Recombinant TNFa, Rat;

Antibody: Rabbit Anti-Rat TNFa Ab (PAA133Ra01)

[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.