APA563Hu01 100μg
Active Interleukin 1 Beta (IL1b)
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: Ala117~Ser269

Tags: N-terminal His-tag

Purity: >95%

Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% sarcosyl, 5% trehalose, and Proclin300.

Predicted isoelectric point: 7.1

Predicted Molecular Mass: 21.1kDa

Accurate Molecular Mass: 21kDa as determined by SDS-PAGE reducing conditions.

Applications: Cell culture; Activity Assays; In vivo assays.

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

[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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                    APVR SLNCTLRDSQ QKSLVMSGPY ELKALHLQGQ
DMEQQVVFSM SFVQGEESND KIPVALGLKE KNLYLSCVLK DDKPTLQLES
VDPKNYPKKK MEKRFVFNKI EINNKLEFES AQFPNWYIST SQAENMPVFL
GGTKGGQDIT DFTMQFVSS
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[ACTIVITY]

IL-1β (Interleukin-1 beta) is a proinflammatory and immunoregulatory cytokine involved in a variety of cellular activities. It is produced by activated macrophages as a proprotein, and then proteolytically processed to an active form. It has been reported that IL-1β-induced IL-6 production is mediated by both PI3K and IRAK4 in A549 cells. To detect the bioactivity of IL-1β, A549 cells were seeded into 24-well plate at a density of $1x10^5$cells/mL, and allowed to attach overnight before treated with or without certain concentrations (1ng/mL, 10ng/mL) of IL1-β for 4h and IL-6 levels in the cell supernatant were determined by ELISA.

IL-6 levels in the cell supernatant of A549 cells increased significantly after stimulated with IL1-β, the data was shown in Table 1 and Figure 1.

Sample (cell supernatant of A549 cells)	O.D. value	Corrected	Concentration of IL-6 (ng/mL)
stimulated with IL-1β (1ng/mL)	0.665	0.609	2.36
stimulated with IL-1β (10ng/mL)	0.631	0.574	2.21
unstimulated	0.309	0.253	0.86

Table 1. IL-6 levels in the cell supernatant of A549 cells up-regulated by IL1-β.

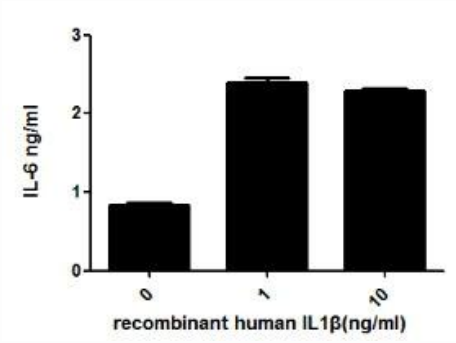

Figure 1. IL-6 levels in the cell supernatant of A549 cells up-regulated by IL1-β.

[IDENTIFICATION]

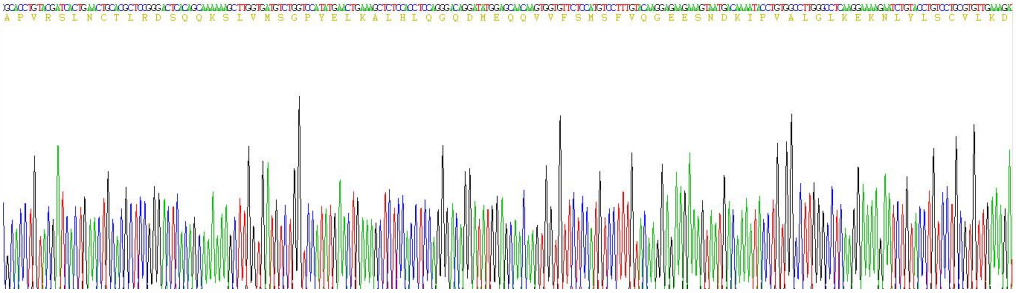

Figure 2. Gene Sequencing (extract)

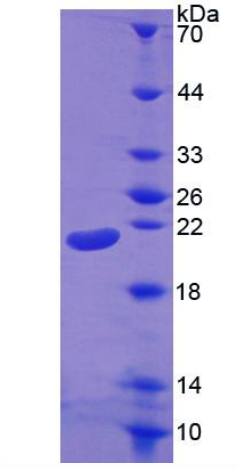

Figure 3. SDS-PAGE

Sample: Active recombinant IL1b, Human

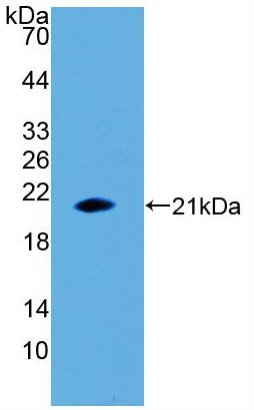

Figure 4. Western Blot

Sample: Recombinant IL1b, Human;

Antibody: Rabbit Anti-Human IL1b Ab (PAA563Hu01)