APA563Hu01 10μg
Active Interleukin 1 Beta (IL1b)
Organism Species: Homo sapiens (Human)
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: 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 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: 7.1
Predicted Molecular Mass: 21.1kDa
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]

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

[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.

Result: 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.

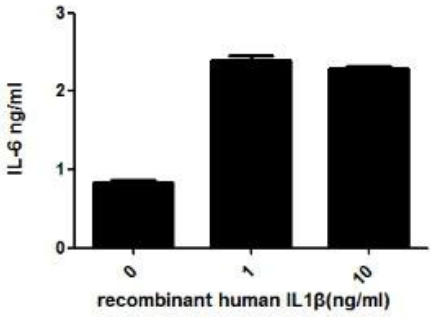

Figure 1. IL-6 levels in the cell supernatant of A549 cells up-regulated by IL1-β.

[IDENTIFICATION]

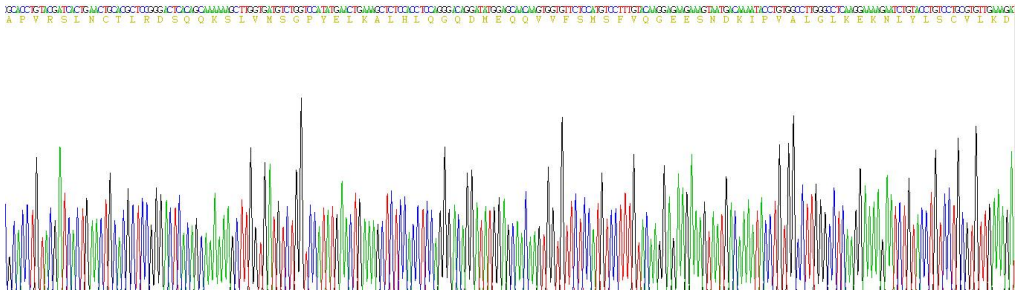

Figure 2. Gene Sequencing (extract)

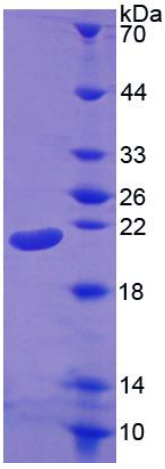

Figure 3. SDS-PAGE

Sample: Active recombinant IL1b, Human

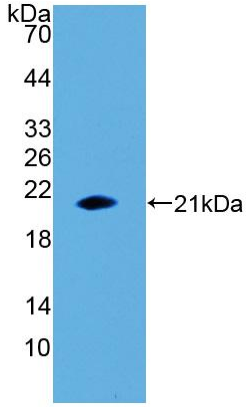

Figure 4. Western Blot

Sample: Recombinant IL1b, Human;

Antibody: Rabbit Anti-Human IL1b Ab (PAA563Hu01)

[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.