APA563Mu61 100μg
Active Interleukin 1 Beta (IL1b)
Organism Species: Mus musculus (Mouse)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Eukaryotic expression.

Host: 293F cell

Residues: Val118~Ser269

Tags: N-terminal His-tag

Purity: >98%

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.

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: 8.4

Predicted Molecular Mass: 19.0kDa

Accurate Molecular Mass: 19kDa 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]

VPI RQLHYRLRDE QQKSLVLSDP YELKALHLNG QNINQQVIFS MSFVQGEPSN DKIPVALGLK GKNLYLSCVM KDGTPTLQLE SVDPKQYPKK KMEKRFVFNK IEVKSKVEFE SAEFPNWYIS TSQAEHKPVF LGNNSGQDII DFTMESVSS

[ACTIVITY]

IL-1β (Interleukin-1 beta) is a proinflammatory and immunoregulatory cytokine involved in a variety of cellular activities. It has been elucidated that IL-1β stimulation of cells activates MMP-9 (matrix metalloproteinases-9) secretion by the activation of the dual signalling pathways. Thus, a stimulation assay of IL-1β was conducted using 3T3 cell line, and the MMP-9 activity was detected through gel zymography. Briefly, 1×10^6 3T3 cells were cultured overnight in 5%DMEM, washed with serum-free medium and then stimulated with different concentrations of IL-1β for 20h, and cell lysates were collected to measure MMP-9 activity. Cell lysates samples were denatured by SDS loading buffer, electrophoresed through sodium dodecyl sulphate–polyacrylamide gel (SDS–PAGE; 10% gels) containing gelatin (1mg/mL) with nonreducing conditions. After renaturation, incubation and coomassiebrilliant blue (CBB)-stained, MMPs hydrolyzed gelatin nearby, indicated by the white binds on the gel.

Result： Increased MMP-9 activity in 3T3 cells due to the stimulation of IL-1β was shown in Figure 1.

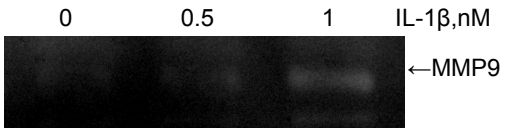

Figure 1. Activation of MMP-9 by IL-1β.

[IDENTIFICATION]

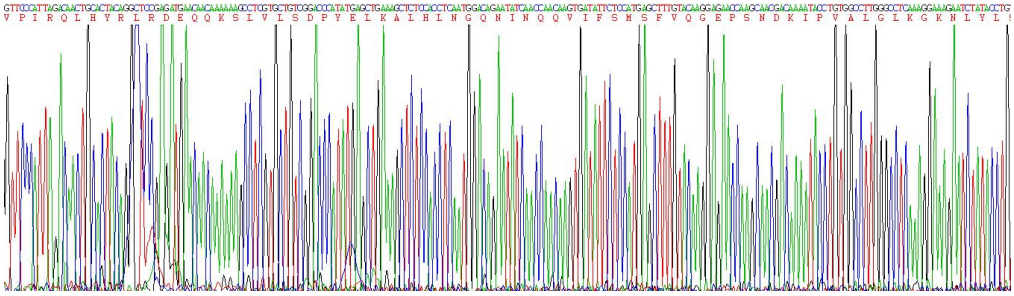

Figure 2. Gene Sequencing (extract)

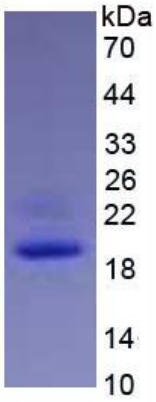

Figure 3. SDS-PAGE

Sample: Active recombinant IL1b, Mouse

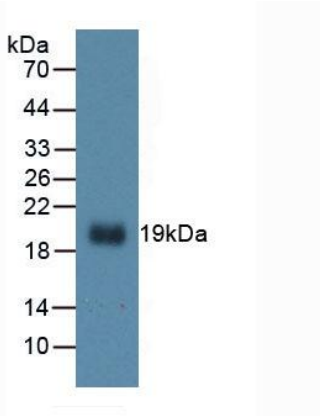

Figure 4. Western Blot

Sample: Recombinant IL1b, Mouse;

Antibody: Rabbit Anti-Mouse IL1b Ab (PAA563Mu06)