

**APA563Ov01 100µg**  
**Active Interleukin 1 Beta (IL1b)**  
**Organism Species: *Ovis aries*; *Ovine* (Sheep)**  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Met1~Pro266

**Tags:** N-terminal His-tag

**Purity:** >97%

**Traits:** Freeze-dried powder

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

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.

**Original Concentration:** 200µg/mL

**Applications:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 5.0

**Predicted Molecular Mass:** 34.4kDa

**Accurate Molecular Mass:** 35kDa as determined by SDS-PAGE reducing conditions.

## **[ USAGE ]**

Reconstitute in 10mM PBS (pH7.4) 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.

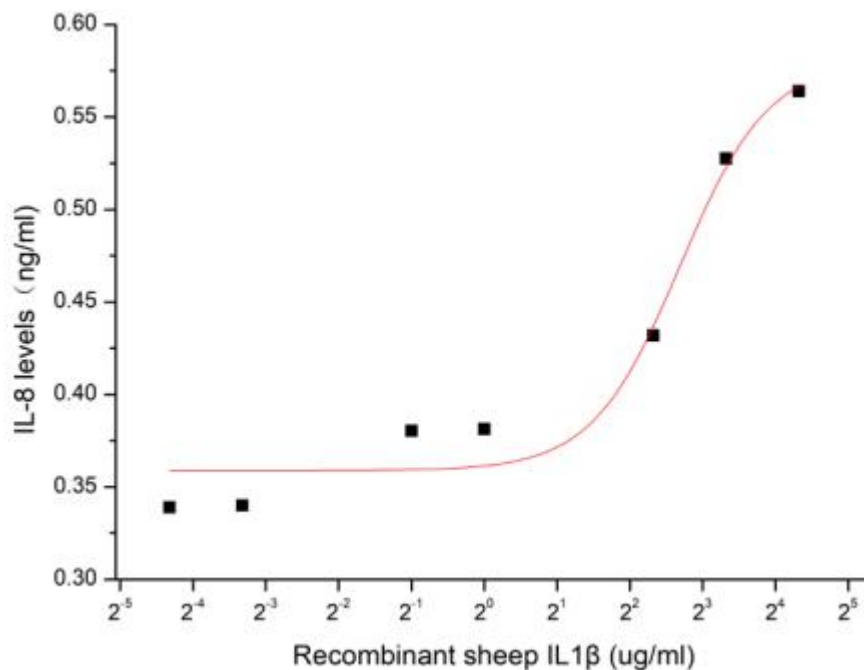
**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## **[ SEQUENCE ]**

```
MATVPEPINE VMAYYSDENE LLFEVDGPKQ MKSCTQHLDL GSMGDGNIQL  
QISHQLYNKS FRQVSVIVA MEKLRSRAYE HVFRDDDLRS ILSFIFEEEP  
VIFETSSDEL LCDAAVQSVK CKLQDREQKS LVLDSPCVLK ALHLPSQEMS  
REVVFCMSFV QGEERDNKIP VALGIRDKNL YLSCVKKGDT PTLQLEEVDP  
KVYPKRNMEK RFVFKTEIK NTVEFESVLY PNWYISTSQI EEKPVFLGRF  
RGGQDITDFR METLSP
```

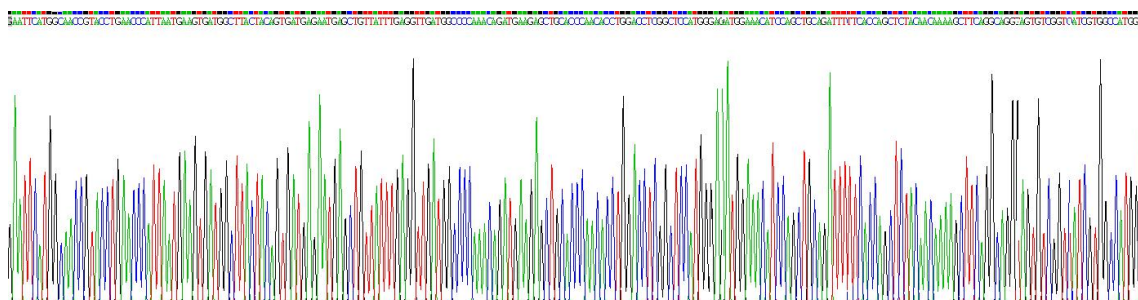
## **[ ACTIVITY ]**

Interleukin 1 beta (IL-1 $\beta$ ) also known as leukocytic pyrogen, leukocytic endogenous mediator, mononuclear cell factor, lymphocyte activating factor and other names, is a member of the interleukin 1 family of cytokines. This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis. It has been reported that IL-1 $\beta$  can induced IL-8 production in A549 cells. To test the bioactivity of recombinant sheep IL-1 $\beta$ , A549 cells were seeded into 24-well plate at a density of 1x10<sup>5</sup> cells/mL , and allowed to attach overnight before treated with certain concentrations of recombinant sheep IL-1 $\beta$  for 48h and IL-8 levels in the cell supernatant were determined by ELISA (SEA080Hu). IL-8 levels in the cell supernatant of A549 cells increased significantly after stimulated with IL-1 $\beta$  which was shown in Figure1, the EC<sub>50</sub> was 6.47 ug/ml.

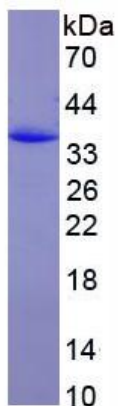


**Figure1. IL-8 levels in the cell supernatant of A549 induced by recombinant sheep IL-1β**

## [ IDENTIFICATION ]



**Figure 2. Gene Sequencing (extract)**



**Figure 3. SDS-PAGE**

**Sample: Active recombinant IL1b, Sheep**

### **[ IMPORTANT NOTE ]**

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.