

**APB406Bo01 100µg**  
**Active Lipopolysaccharide Binding Protein (LBP)**  
**Organism Species: *Bos taurus*; Bovine (Cattle)**  
***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:** His224~Asp468

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

**Purity:** >95%

**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:** 6.8

**Predicted Molecular Mass:** 31.2kDa

**Accurate Molecular Mass:** 31kDa 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.

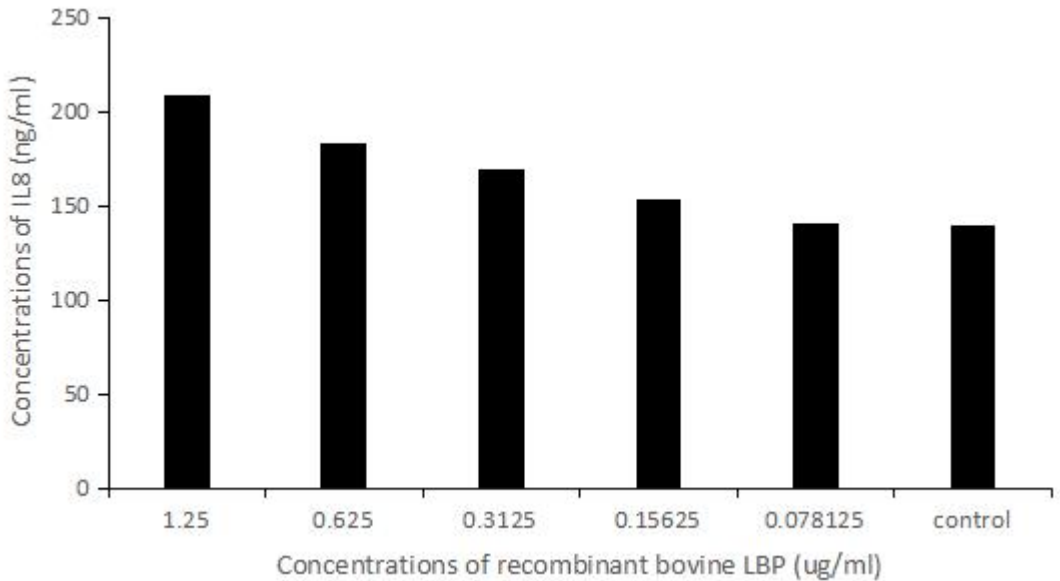
**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration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

## **[ SEQUENCE ]**

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HLAGLDY SLMGAPQATA QMLDVMFKGE
IFSRDDRFPV AFLAPVMNLP EEHSRMVYFA ISDYAFNTAS LVIYHKAGFLN
FTITDDVIPP DSSIRQNTKS FRAFPRIAR LYPNTNLELQ GAVISAPCLN
FSPGNLSTAA QMEIEAFVLL PNSVKEPVFR LSVATNVSAM LTFNTSKITG
FLEPGKIQVE LKESKVGRFN VELLEALLNY YLLNNFYPKV NDKLAEGFPL
PLLRKIQLYD PILQIHKD
```

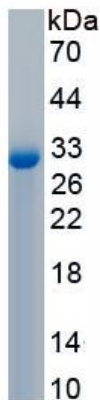
## **[ ACTIVITY ]**

Lipopolysaccharide Binding Protein (LBP) is a soluble acute-phase protein that binds to bacterial lipopolysaccharide (or LPS) to elicit immune responses by presenting the LPS to important cell surface pattern recognition receptors called CD14 and TLR4. This protein is part of a family of structurally and functionally related proteins, including BPI, plasma cholesteryl ester transfer protein (CETP), and phospholipid transfer protein (PLTP). It has been reported that LBP can enhance LPS-stimulated IL-8 secretion by THP-1 cells. To test the bioactivity of recombinant bovine LBP, THP-1 cells were seeded into 24-well plate at a density of  $1 \times 10^6$  cells/mL including 1 ug/mL LPS, and treated with certain concentrations (0.078125 ug/mL-1.25 ug/mL) of rbLBP for 24h and IL-8 levels in the cell supernatant were determined by ELISA. IL-8 levels in the cell supernatant of THP-1 cells increased significantly after stimulated with recombinant bovine LBP have shown in Figure 1.



**Figure1. IL-8 levels in the cell supernatant of THP-1 induced by recombinant bovine LBP**

**[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant LBP, Cattle**

**[ 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.