

**APB406Mu02 100µg**  
**Active Lipopolysaccharide Binding Protein (LBP)**  
**Organism Species: *Mus musculus (Mouse)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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1st Edition (Apr, 2016)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Gly25~Pro259

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

**Purity:** >92%

**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.

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

**Predicted isoelectric point:** 8.6

**Predicted Molecular Mass:** 29.3kDa

**Accurate Molecular Mass:** 55kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then

cleaved to give the active form.

5. Polymerization of the target protein: Dimerization, multimerization etc.

## **[ 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 ]**

GVNPGVVARITDKGLAYAAKEGLVALQRELYKITLPDFSGDFKIKAVGRGQYEFHSLEIQNCELRGSSSLKLLPGQGLSLAISDSSIGV  
RGKWKVRKSFLLKHGSFDLVDKGVTVISVDLLLGMDPGSRPTVSASGCSSRICDLVDVHISGNVGVLLNLFHNQIESKLQKVLNKKVCEM  
IQKSVTSDLQPYLQTLPVTAIEDNVLGIDYSLVAAPQAKAQVLDVMFKGEIFNRNHRSP

## **[ ACTIVITY ]**

Lipopolysaccharide Binding Protein (LBP) is a soluble acute-phase protein that binds to bacterial lipopolysaccharide (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 LBP, THP-1 cells were seeded into 24-well plate at a density of  $1 \times 10^6$  cells/mL including 1ug/mL LPS, and treated with certain concentrations (0.625ug/mL-20ug/mL) of LBP 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 LBP have shown in Figure 1.

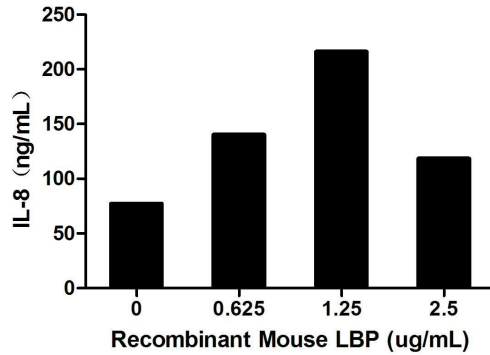


Figure 1. IL-8 levels in the cell supernatant of THP-1 induced by LBP.

## [ IDENTIFICATION ]

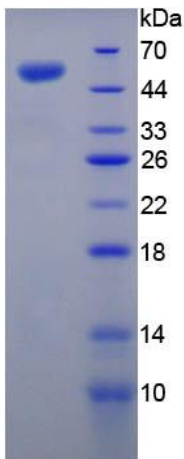
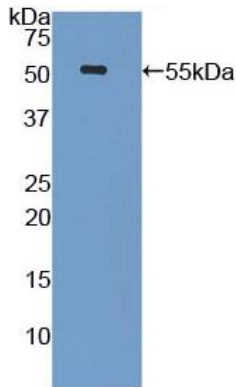


Figure 2. SDS-PAGE

Sample: Active recombinant LBP, Mouse



**Figure 3. Western Blot**

**Sample: Recombinant LBP, Mouse;**

**Antibody: Rabbit Anti-Mouse LBP Ab (PAB406Mu02)**

### **[ 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.