

APB406Hu01 100µg

Active Active Lipopolysaccharide Binding Protein (LBP)

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: Asn27~Val481

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.

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

Predicted isoelectric point: 6.4

Predicted Molecular Mass: 52.1kDa

Accurate Molecular Mass: 52kDa 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 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]

```
NPGL VARITDKGLQ YAAQEGLLAL
QSELLRITLP DFTGDLRIPH VGRGRYEFHS LNIHSCCELLH SALRPVPGQG
LSLSISDSSI RVQGRWKVRK SFFKLQGSFD VSVKGISISV NLLLGSESSG
RPTVTASSCS SDIADVEVDM SGDLGWLLNL FHNQIESKFQ KVLESRICEM
IQKSVSSDLQ PYLQTLPVTT EIDSFADIDY SLVEAPRATA QMLEVMFKGE
IFHRNHRSPV TLLAAVMSLP EEHNKMVYFA ISDYVFNTAS LVYHEEGYLN
FSITDDMIPP DSNIRLTTKS FRPFVPRLAR LYPNMNLELQ GSVPSAPLLN
FSPGNLSVDP YMEIDAFVLL PSSSKEPVFR LSVATNVSAT LTFNTSKITG
FLKPGKVKVE LKESKVGFLFN AELLEALLNY YILNTFYPKF NDKLAEGFPL
PLLKRVQLYD LGLQIHKDFL FLGANVQYMR V
```

[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. The protein encoded by this gene is involved in the acute-phase immunologic response to gram-negative bacterial infections. 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). Besides, Cluster Of Differentiation 14 (CD14) has been identified as an interactor of LBP, thus a binding ELISA assay was conducted to detect the interaction of recombinant human LBP and recombinant human CD14. Briefly, LBP were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µL were then transferred to CD14-coated microtiter wells and incubated for 2h at 37°C. Wells

were washed with PBST and incubated for 1h with anti-LBP pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of LBP and CD14 was shown in Figure 1, and this effect was in a dose dependent manner.

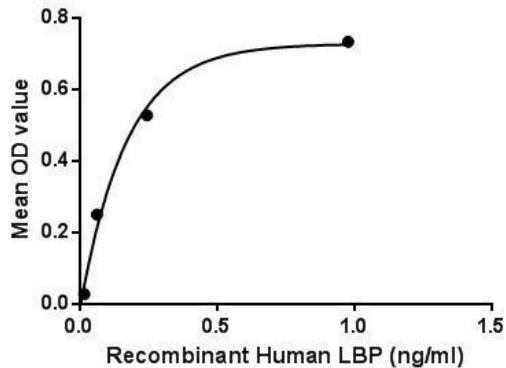


Figure 1. The binding activity of LBP with CD14.

[IDENTIFICATION]

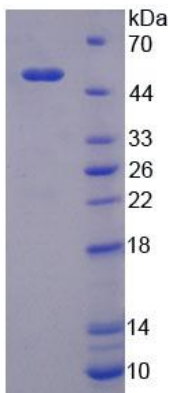


Figure 2. SDS-PAGE

Sample: Active recombinant LBP, Human

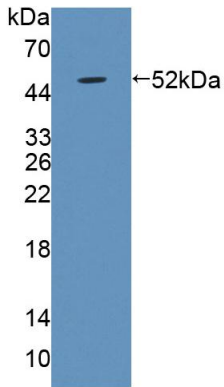


Figure 3. Western Blot

Sample: Recombinant LBP, Human;

Antibody: Rabbit Anti-Human LBP Ab (PAB406Hu01)

[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.