

Lipopolysaccharide Binding Protein Active Protein | LBP active protein

Active Lipopolysaccharide Binding Protein (LBP)

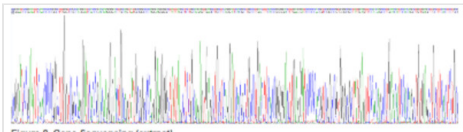
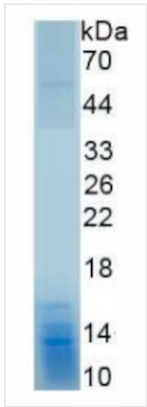
CATALOG # AAA21164	HOST E. coli	APPLICATIONS Cell Culture, Activity Assay
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PRODUCT SYNONYMS

Lipopolysaccharide Binding Protein; Active Lipopolysaccharide Binding Protein (LBP); LPS-Binding Protein; LBP active protein

PRODUCT SPECIFICATIONS

Host	E. coli
Purity/Purification	>80%
Form/Format	PB, pH7.4, containing 0.01% SKL
Applicable Applications for LBP active protein	Cell Culture, Activity Assay
Application Notes	(May be suitable for use in other assays to be determined by the end user.)
Source	Prokaryotic expression
Residues	Asn27~Val481
Tags	N-terminal His-tag
Endotoxin Level	<1.0EU per 1µg (determined by the LAL method).
Isoelectric point	6.4
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 10mM PB (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	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.

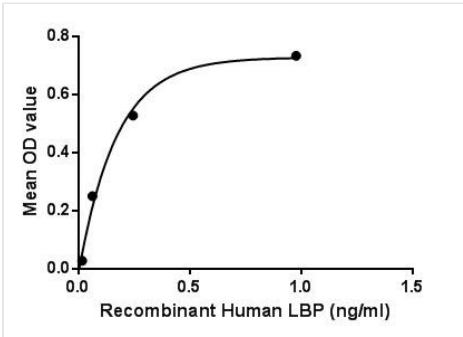


Identification

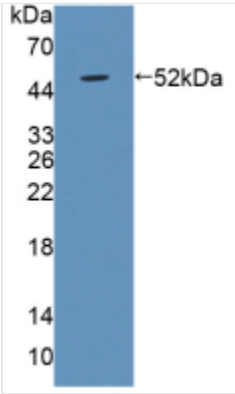
SDS-PAGE
Sample: Active recombinant LBP, Human

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NPGL VARITDKGLQ YAAQEGLLAL
QSELLRITLP DFTGDLRIPH VGRGRYEFHS LNIHSCCELLH SALRPVPQGG
LSLSTSDSSI RVQGRWKVRK SFFKLGSEFD VSVKGTSTSV NLLGSESSG
RPTVTASSCS SDIADVEVDM SGLGNLLNL FHNQIESKFO KVLESRICEM
IQKSVSSDLQ PYLQTLPTVT EIDSFADIDY SLVEAPRATA QMLEVMFKGE
IFHRNHRSPV TLLAAMVSLP EEHNKMYVFA ISDYVFNTAS LVYHEEGYLN
FSITDDNIPP DSNIRLTKS FRPFVPRLAR LYPNMNLELQ GSVPSAPLLN
FSPGNLSVDP YMEIDAFVLL PSSSKEPVFR LSVATNWSAT LTFNTSKITG
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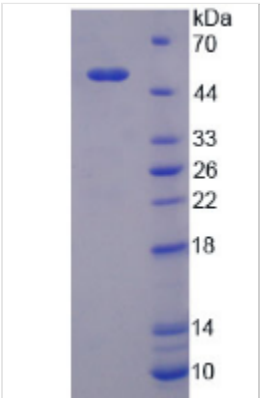
Sequence



Biological Activity Testing
Figure. The binding activity of LBP with CD14. 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 100uL were then transferred to CD14-coated microtiter wells and incubated for 2h at 37. 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. Finally, add 50uL 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.



WB (Western Blot)
Figure. Western Blot



SDS-PAGE
Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for LBP active protein	Infection immunity
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NCBI AND UNIPROT INFORMATION

NCBI GI #	31652249
NCBI GeneID	3929
NCBI Accession #	NP_004130.2
NCBI GenBank Nucleotide #	NP_004130.2
UniProt Accession #	P18428
Molecular Weight	Predicted Molecular Mass: 52.1kDa Accurate Molecular Mass: 52&10-14kDa as determined by SDS-PAGE reducing conditions.
NCBI Official Full Name	lipopolysaccharide-binding protein
NCBI Official Synonym Full Names	lipopolysaccharide binding protein
NCBI Official Symbol	LBP
NCBI Official Synonym Symbols	BPIFD2
NCBI Protein Information	lipopolysaccharide-binding protein
UniProt Protein Name	Lipopolysaccharide-binding protein
UniProt Gene Name	LBP
UniProt Synonym Gene Names	LBP
UniProt Entry Name	LBP_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/e-coli-lbp-active-protein/lipopolysaccharide-binding-protein/21164>