

Human LBP / Lipopolysaccharide binding Protein (His Tag)

Catalog Number: 10526-H08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

BP1FD2; Bp1fd2; Ly88

Protein Construction:

A DNA sequence encoding the human LBP (NP_004130.2) extracellular domain (Met 1-Val 481) was fused with the a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ala 26

Molecular Mass:

The recombinant human LBP consists of 467 amino acids and has a predicted molecular mass of 52.5 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhLBP is approximately 62 kDa due to glycosylation.

Formulation:

Lyophilized from sterile 20mM Tris, 100mM NaCl, 0.05mM EDTA, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

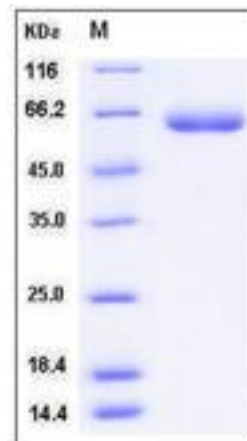
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Lipopolysaccharide binding protein (LBP) is a glycoprotein that is synthesized principally by hepatocytes. LBP is a trace plasma protein that binds to the lipid A moiety of bacterial lipopolysaccharides (LPSs). LBP binds directly to the outer membrane of Gram-negative bacteria and to purified aggregates of extracted endotoxin, and catalyses the delivery of endotoxin to membrane (mCD14,GPI-Linked) and soluble (sCD14) forms of CD14, thereby markedly increasing host cell sensitivity to endotoxin. LBP efficiently catalyses the transfer of individual molecules of endotoxin to (s)CD14 only when LBP–endotoxin aggregates are formed in the presence of albumin. In the presence of EDTA, LBP binding promotes further disaggregation of endotoxin. LBP binding does not have such drastic effects under more physiological conditions, but may still induce more subtle topological rearrangements of endotoxin.

References

- 1.J. Weiss, 2003, Biochemical Society Transactions: Volume 31, part 4: 785-790.
- 2.RR Schumann, et al., Science, 1990, Vol 249, Issue 4975: 1429-143.
- 3.Carsten J. Kirschning, et al., 1997, Genomics, Volume 46, Issue 3: 416-25.

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>