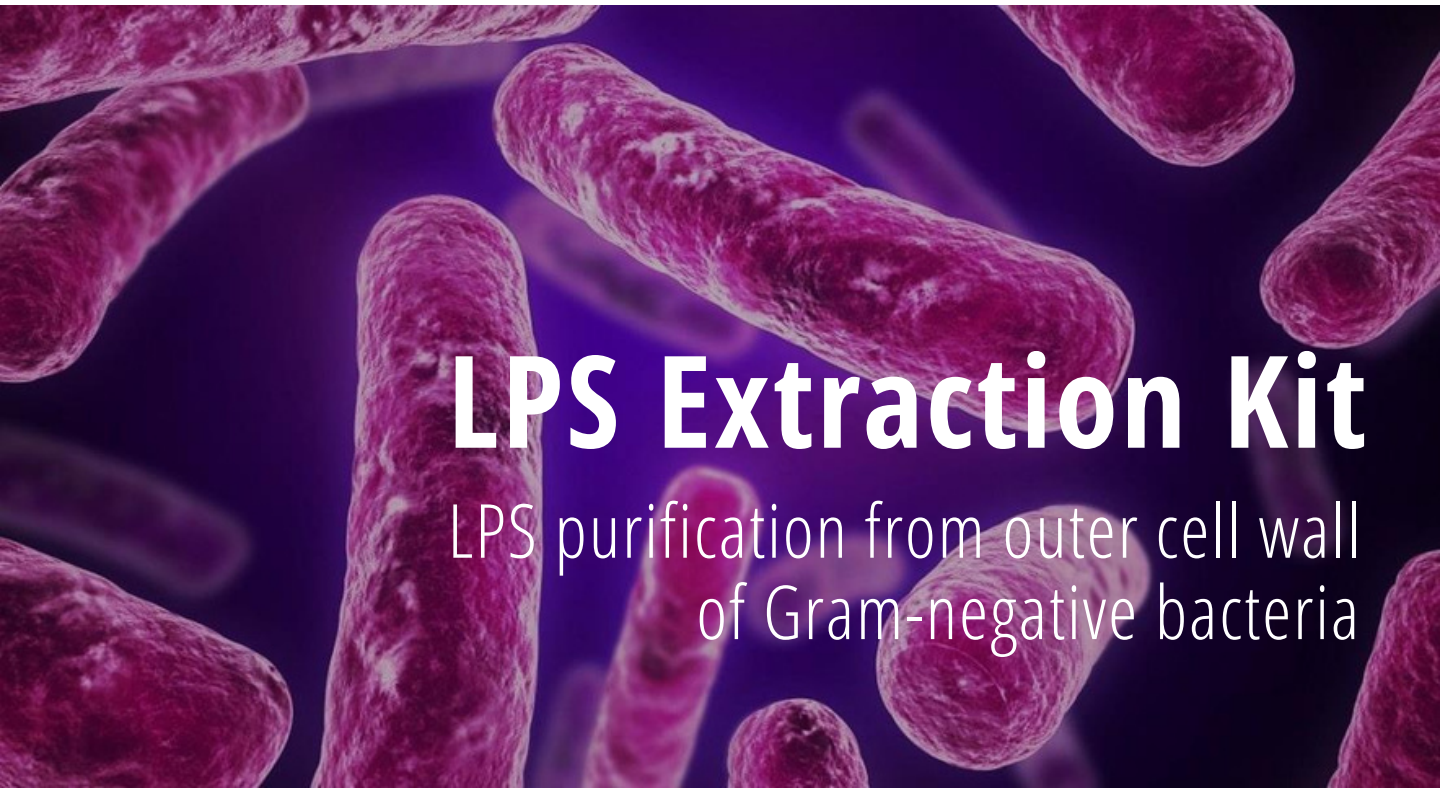


LPS Extraction Kit

LPS purification from outer cell wall of Gram-negative bacteria

Product image

<Cat. No. : 17141>

Kit contents

LPS Extraction Kit	100 preps
Lysis Buffer	100 ml
Purification Buffer	80 ml

Features and characteristics

- Isolation/purification of LPS in Gram-negative bacteria
- Phenol-water method of LPS extraction
- Effective removal of contaminants such as proteins and nucleic
- acids The most efficient and simple LPS extraction product
- The entire process of extracting LPS is completed in up to 60 minutes

Kit procedure

STEP 1: Lysis

The bacterial cells are lysed by organic solution. Phospholipid and protein Components of cell membrane disrupted and cell components are released in solution.

STEP 2 : LPS purification

Purification of LPS among the released cell components with high salt concentration solution.

STEP 3 : Washing and Elution

Salts are briefly removed by a washing step for high quality LPS.

LPS Extraction Kit

Description

Lipopolysaccharides(LPS) is a major constituent of the outer membrane of gram-negative bacteria. Some of its functions include a role in the resistance to phagocytosis, resistance to serum, outer membrane permeability barrier and as a receptor for adsorption of some bacteriophages. The hot phenol-water extraction method is usually used for extraction of LPS but takes a long time and this procedure is complicated. And the method has major limitations in our hands when attempting to manipulate such small quantities of cells. LPS Extraction Kit is designed for rapid, convenient microscale extraction of LPS from bacterial cells which is broadly applicable among different gram-negative bacteria and appropriate for the small numbers of cells.

Applications

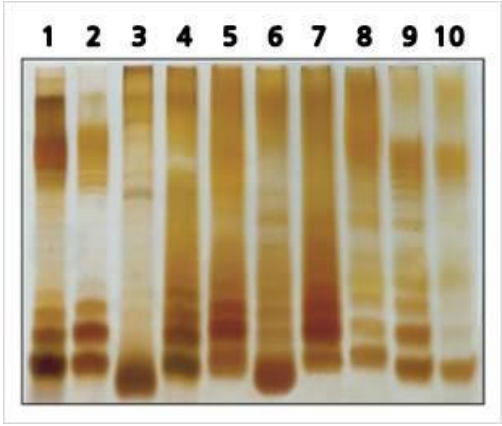
- LPS composition and structure study
- Phylogenetic study of bacteria
- Antibiotic target research
- LPS inhibitory drug design study
- Carbohydrate antigen immune response study

Technical data

Strain	LPS yield (μg)	Protein contamination*
S. typhimurium	200 ~ 400	< 0.2 μg
S. enteritidis	90 ~ 250	< 0.2 μg
S. gallinarum	150 ~ 450	< 0.2 μg
E. coli(wild type)	220 ~ 490	< 0.2 μg
E. coli(O:055)	260 ~ 510	< 0.2 μg
E. coli(O:111)	220 ~ 500	< 0.2 μg
E. Coli (O:1)	180 ~ 380	< 0.2 μg
E. coli (O:2)	180 ~ 380	< 0.2 μg

After extracting LPS from each G(-) strain of OD600 using the LPS Extraction Kit, the extracted LPS was quantified using Purpald Assay, and as a result, the above extraction efficiency was confirmed. On the other hand, the presence of protein was observed using our SMART™ Micro BCA Assay Kit, and contamination of less than 0.2 μg was confirmed.

Band pattern of LPS extracted from various strains



Lane 1 : S. typhimurium Lane 2 : S. enteritidis
Lane 3 : E. coli (O055) Lane 4 : E. coli (O111) Lane 5 : S. gallinariumLane 6 : S. enteritidis
Lane 7 : S. typhimurium Lane 8 : E. coli (wild tyoe)
Lane 9 : E, coli (O111) Lane 10 : E. coli (O2)

As a result of silver staining after SDS-PAGE of LPS extracted from various types of Gram-negative bacteria, a band pattern in the form of a ladder is observed according to the characteristics of the LPS present as a multimer and the number of multimers. It is observed that there is a difference in pattern.

Ordering information

Product	Cat. No.	Capacity
LPS Extraction Kit	17141	100rxn