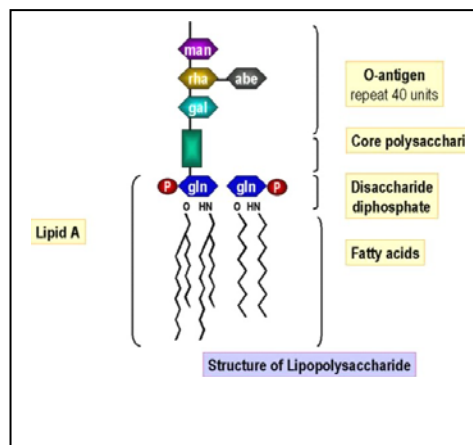


LPS Elisa Endotoxin Test vs. LAL Method

Lipopolysaccharide (Lipopolysaccharides ,LPS) is one of the main components of Gram-negative bacteria, which is also known as endotoxin in traditional idea. LPS can cause fever, shock, and even lead to death. With growing popularity of genetic engineering techniques in biological products and reagents, LPS becomes an important indicator to monitor residual bacteria as well as pyrogenicity in bio-products such as purified proteins.

The LPS antibody and related immunoassay Kit are rare products on the current market owing to the nature of LPS itself, a thymus independent antigen (TI antigen) that doesn't induce strong immune reactions in host animals. Therefore, it is impossible to obtain high-affinity antibody by using conventional and routine immunological methods.

Our partner company USCN uses proprietary methods to enhance LPS immunogenicity and created monoclonal antibody with high specificity against LPS. Hybridomas created to produce antibody pairs used in the Sandwich ELISA kit ([E91526Ge-1](#)), providing the highest specificity and sensitivity for endotoxin detection and quantification. Since the hybridomas can produce the needed antibody consistently, the kit is cheaper to operate than the traditional LAL test. The kit processes 88 samples per test plus 8 controls, compared to a single sample in the LAL method.



LPS ELISA Endotoxin Test vs LAL

	LAL Agglutination (USP Standard)	LPS ELISA Kit
Principles	Agglutination Reaction: LAL reacts with Endotoxin	Specific Antigen-Antibody Interaction
Results	Semi-Quantitative (analog)	Quantitative (digital)
Data Acquisition	Eye Balling a Threshold	Plate Reader
Samples	1 Sample	88 Samples At Once
Platform	Test Tubes	96 Well Plate (8 Well StripWell)
Ease of operation	Multiple Dilutions/Conversion and Calculation	Straightforward dilution and Data Calculation
Sample Volume	>100 ul	50 ul
Pricing	More Time, Higher Cost per Sample	Quick Assay, Lower Cost

The main structure of LPS is shown in the figure above. The lipid A, universal among species, is the main component of the endotoxin. LPS antibody produced by USCN is monoclonal antibody against the conserved region of LPS. Therefore, the LPS Elisa Kit can be used as a general Kit to measure LPS originated from different bacteria, which greatly widens its application. Alternatively, E. coli protein ELISA kit (ECP, [E71655Ge-1](#)), can be used to detect residual E. coli protein specifically, and increase detection sensitivity for E. coli proteins.

Product Information

ELISA Kit for Lipopolysaccharides (LPS): [E91526Ge-1](#)

Applications: LPS or endotoxin quantitation with bio fluids or other samples, 96 assays per kit
Sensitivity: 4.44ng/ml; Detection Range: 12.35-1,000ng/ml

ELISA Kit for Escherichia coli Protein (ECP): [E71655Ge-1](#)

Applications: Quantify residual E. coli proteins in bio fluids or other samples, 96 assays per kit
Sensitivity: 0.134ng/ml; Detection Range: 0.312-20ng/ml