LIST BIOLOGICAL LABORATORIES, INC.

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Product #421

CERTIFICATE OF ANALYSIS
LIPOPOLYSACCHARIDE, ULTRA PURE
From *Escherichia coli* O111:B4
Lot #4218A1

Contents

Each vial contains 1 mg of highly purified lipopolysaccharide (LPS) from *Escherichia coli* type O111:B4, lyophilized in water.

Packaging/Reconstitution/Storage

This product is provided as an aseptically packaged lyophilized powder, sealed under vacuum. It is recommended that this material be stored at 2-8°C prior to and following reconstitution.

Analysis

Endotoxin by kinetic chromogenic LAL assay[1]	3.5 EU/ng
2-Keto-3-deoxyoctonate (KDO)[2]	2.9%
Nucleic acid[3]	0.4%
Protein by Colloidal Gold Transfer Blot[4,5]	<2.5 ng/µg

Handling

Good laboratory technique should be employed in the safe handling of any lipopolysaccharide or lipid A product. Wear appropriate laboratory attire including lab coat, gloves and safety glasses. Nitrile gloves are recommended when handling lyophilized material.

This product is pyrogenic. Avoid accidental autoinoculation by exercising extreme care when handling in conjunction with any injection device.

This product is intended for research purposes by qualified personnel. It is not intended for use in humans or as a diagnostic agent. List Biological Laboratories, Inc. is not liable for any damages resulting from the misuse or handling of this product.

FOR RESEARCH PURPOSES ONLY. NOT FOR USE IN HUMANS.

(continued)

References

1. Endosafe Portable Test System User's Guide, Charles River Laboratories, International, Inc., document #PIPTS 101-10
2. Cynkin, M.A. and Ashwell, G. (1960) *Nature* **186**, 155-156.
3. Determined by absorption at 260 nm.
4. Rohringer, R., and Holden, D.W. (1985) *Anal. Biochem.* **144**, 118-127.
5. Danscher, G. (1981) *Histochemistry* **71**, 81-88

Production: TK Date: 7/1/15 Manager: NS Date: 7/1/15 QA/QC: KP Date: 7/1/15