IBT BIOSERVICES

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# *Staphylococcus aureus* Lipoteichoic acid (LTA)

**Catalog #:** 1600-001

**Lot #:** 1306008

**Description:** Highly Purified lipoteichoic acid (LTA) from *Staphylococcus aureus*.

**Supplied:** 5.0 mg supplied as a lyophilized powder.

**Storage:** 4°C

**Relevance:** LTA can be found at the cell surface of most gram-positive bacteria. Few pathogen recognition receptors have been reported for LTA and a more precise biological role of LTA is still under investigation. When expressed on the cell exterior, LTA is thought to act as an adhesion as well as mediating inflammatory responses in the host.

**Product Specifications:**

| Test | Specification |
|---|---|
| Appearance | Lyophilized powder, white to faint yellow |
| Protein Content (% Protein) | 0.24% |
| Phosphate Content | 6 µmole/mg LTA |
| LPS | 0.016EU/mg |
| Nucleic acid Content (%) | < 2% |

**ELISA Testing:**

Highly purified LTA was coated onto microtiter plates at either 1µg/well or 0.2µg/well. Positive control mouse sera or negative control mouse sera were serially diluted 2-fold starting at a 1:200 dilution and incubated on the coated plates. Washed plates were detected with anti-mouse HRP conjugate and TMB substrate. After stopping the reaction with 0.5M HCL, $OD_{450}$ is reported.

| | Positive Control sera | | Negative Control sera | |
|---|---|---|---|---|
| Dilution | LTA @ 1 µg | LTA @ 0.2 µg | LTA @ 1 µg | LTA @ 0.2 µg |
| 200 | 3.897 | 3.810 | 0.076 | 0.188 |
| 400 | 3.671 | 3.543 | 0.083 | 0.101 |
| 800 | 3.290 | 2.859 | 0.073 | 0.093 |
| 1600 | 2.447 | 1.773 | 0.067 | 0.148 |
| 3200 | 1.322 | 0.938 | 0.070 | 0.104 |
| 6400 | 0.778 | 0.463 | 0.061 | 0.115 |
| 12800 | 0.377 | 0.244 | 0.062 | 0.120 |
| 25600 | 0.190 | 0.126 | 0.058 | 0.111 |
| 51200 | 0.106 | 0.088 | 0.058 | 0.123 |
| 102400 | 0.070 | 0.075 | 0.062 | 0.138 |
| Background | 0.047 | 0.059 | 0.117 | 0.066 |

**TLR2 Stimulation: Not tested**

**References**

1. The Physiology and Biochemistry of Prokaryotes, 2nd ed., White, D., Oxford University Press (New York, NY: 999), p.16.
2. Schroder, *et al*., J. Biol. Chem. 2003, 278:15587-15594.