DNA Aptamer against *Escherichia coli* O157 LPS

SKU# APT-073: DNA Aptamer against *Escherichia coli* O157 Lipopolysaccharide (LPS)

Background

Lipopolysaccharide (LPS) is a major component of the outer membrane of Gram-negative bacteria, including *Escherichia coli* O157:H7. O55-16 is a cytosine-rich DNA aptamer reported to bind purified *E. coli* O157 LPS with low-nanomolar apparent affinity. It also recognizes LPS from other Gram-negative bacteria and is not exclusive to the O157:H7 serotype.

Aptamer type: Single-stranded DNA (ssDNA)

Aptamer length: 30 nucleotides (30 nt)

Affinity K_D: 2.0 ± 0.6 nM

Affinity assay: ELONA with immobilized LPS

Kit contents

The following components are included in the Kit.

	Component	Quantity
APT-073-10	Single strand DNA, lyophilized powder	10 nmol
APT-073-30	Single strand DNA, lyophilized powder	30 nmol

- Store at -20°C; reagents are guaranteed stable for 12 months when properly stored.

References

Tatsumi, A., Koyama, N., and Yamashita, M. Cytosine-Rich DNA Aptamers Reveal Recognition Principles for Structurally Diverse Lipopolysaccharides. *ACS Meas. Sci. Au*, 2026, 6(5):1703-1712. DOI: 10.1021/acsmeasuresciau.6c00157.

Research use only.