AMPIGENE® E. coli DNA Detection Kit (dPCR)

Digital PCR kit for absolute quantification of residual E. coli host cell DNA with built-in inhibition control

The AMPIGENE® E. coli DNA Detection Kit (dPCR) is a powerful digital PCR solution for quantitating residual DNA from E. coli expression systems. By harnessing probe-based dPCR chemistry with a built-in Internal Positive Control (IPC), the AMPIGENE® E. coli assay provides a rapid and reliable approach for accurately quantifying residual E. coli DNA without standard curve dependency. The assay offers exceptional sensitivity (LOD 1.5 fg/µL) and specificity, helping ensure that quantitation data obtained from a wide range of sample types and is reliable and consistent. The dual-channel design (FAM for E. coli target, HEX for IPC) monitors for PCR inhibition in every sample, instilling confidence in your results even with complex biopharmaceutical matrices. Compatible with any dPCR platform — no instrument lock-in or requalification required. DNA extraction requires the AMPIXTRACT™ Magnetic Bead Extraction Kit (ENZ-GEN514), sold separately.

Absolute Quantification — No Standard Curve Required Digital PCR provides single-molecule counting for unmatched precision at ultra-low DNA concentrations, making it ideal for final product release testing where regulatory limits are strictest. Unlike qPCR, dPCR partitions each sample into thousands of independent reactions, enabling absolute quantification through Poisson statistics — eliminating standard curve variability and delivering superior precision at trace-level concentrations.

Ordering Information

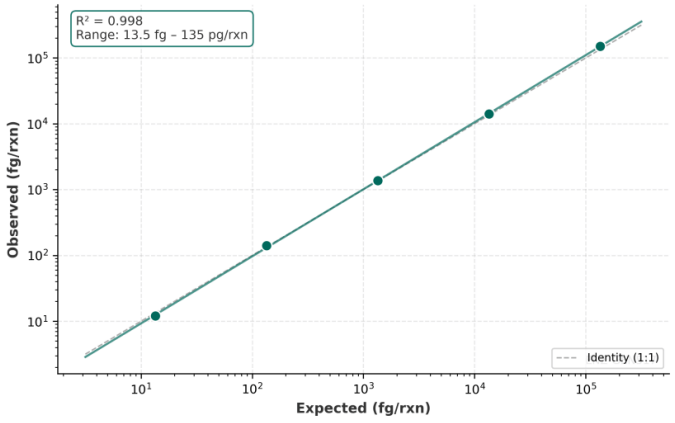
Order Online »

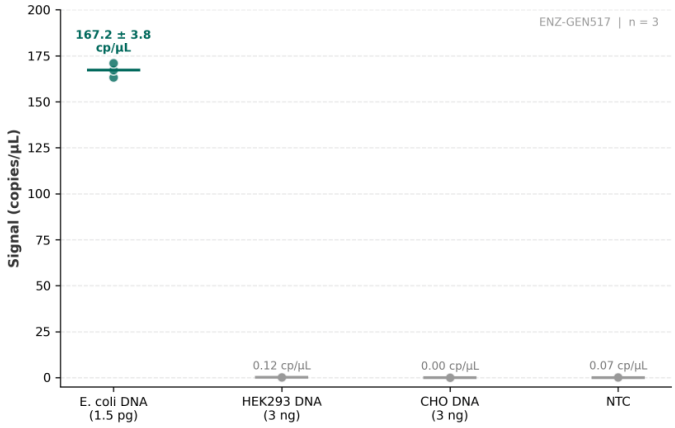
ENZ-GEN517-0100	100 reactions - 100Reactions

Manuals, SDS & CofA

View Online »

- Accurate, absolute quantification of residual E. coli DNA — no standard curve required
- Highly sensitive — LOD 1.5 fg/µL, LOQ 1.5 fg/µL
- Built-in Internal Positive Control (IPC) on HEX channel monitors for PCR inhibition in every sample
- Easy-to-use kit with 5X E. coli Taq/Assay Mix and 20X E. coli Probe Mix — results in approximately 3 hours
- Dynamic range: 1.5 fg/µL – 50 ng/µL
- Platform agnostic — runs on any dPCR system, no lock-in or requalification
- Linearity $R^2 > 0.99$; Precision ≤ 15% CV
- Sample recovery: 80–120%
- ICH Q2(R2) method validation report available at no extra cost
- Suitable for Research and Manufacturing Use


AMPIGENE® E. coli DNA Detection Kit (dPCR)
Linearity (Observed vs Expected)
R² = 0.998
Range: 13.5 fg – 135 pg/rxn
Observed (fg/rxn)
Expected (fg/rxn)
Identity (1:1)


AMPIGENE® E. coli DNA Detection Kit (dPCR)
Specificity / Cross-Reactivity
ENZ-GEN517 | n = 3
Signal (copies/µL)
167.2 ± 3.8 cp/µL
0.12 cp/µL
0.00 cp/µL
0.07 cp/µL
E. coli DNA (1.5 pg)
HEK293 DNA (3 ng)
CHO DNA (3 ng)
NTC

Handling & Storage

Use/Stability	When stored and handled as directed, the kit is stable until the expiration date on the label. Protect from light.
Handling	Store all components at −20°C (Long-term), protected from light. Avoid repeated freeze-thaw cycles.
Short Term Storage	+4°C
Long Term Storage	−20°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	dPCR
Contents	5X E. coli Taq/Assay Mix (360 µL); 20X E. coli Probe Mix (60 µL)
Sensitivity	LOD: 1.5 fg/µL; LOQ: 1.5 fg/µL
Technical Info / Product Notes	Detection channels: FAM (E. coli target) / HEX (IPC). Dynamic range: 1.5 fg/µL – 50 ng/µL. NTC threshold: ≤ 0.5 cp/µL. IPC expected readout: 10–100 cp/µL (HEX). Reaction volume: 9 µL per well (7 µL mix + 3 µL template). Requires AMPIXTRACT™ Magnetic Bead Extraction Kit (ENZ-GEN514), sold separately. A qPCR version of this kit is also available (ENZ-GEN518) with E. coli DNA standard included.

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