

Lyophilization-compatible DNA polymerase—optimized for qPCR assays

Lyo-ready LibertyTaq DNA Polymerase

Lyo-ready Invitrogen™ LibertyTaq™ DNA Polymerase is a hot-start *Taq* DNA polymerase offering superior performance in qPCR assays. The proprietary hot-start technology, with no activation time required, ensures high qPCR specificity and sensitivity. Lyo-ready LibertyTaq DNA Polymerase is produced under a stringent ISO 13485 quality management system, for reliable and reproducible qPCR assays for end users. Formulated at a high concentration (50 U/μL) without glycerol, lyo-ready LibertyTaq DNA Polymerase is lyophilization compatible. The enzyme can be supplied in bulk, as well as packaged and filled to meet your custom requirements.

Product highlights:

- **High concentration, formulated without glycerol**—convenient for lyophilization, alone or with other assay components
- **Innovative hot-start technology**—high specificity and sensitivity, and no enzyme activation required
- **Manufactured in an ISO 13485—registered facility**—high product quality and lot-to-lot consistency
- **Designed to be free of contaminating DNA, based on sensitive qPCR assays**—minimizes potential false-positive results
- **Designed to be free of third-party intellectual property**—cost-effective

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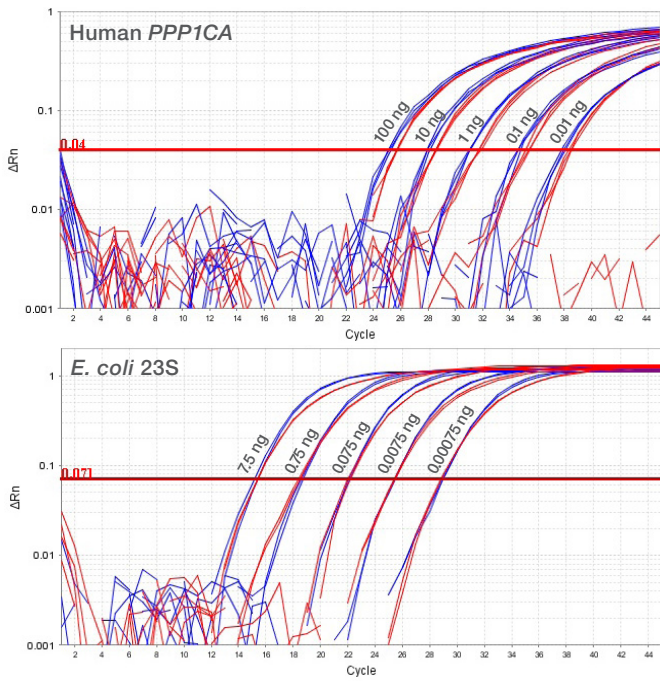


Figure 1. Sensitive, reproducible, and specific qPCR assays. Lyo-ready LibertyTaq (blue curves) and Invitrogen™ Platinum™ Taq (red curves) DNA Polymerases were evaluated for their performance in qPCR using Applied Biosystems™ TaqMan® Assays for human *PPP1CA* and *E. coli* 23S and varying amounts of human or *E. coli* input DNA. Equally efficient and sensitive amplification was achieved with both DNA polymerases. No amplification was observed in no-template controls, indicating that, based on this detection method, formulations are free of contaminating human and *E. coli* DNA.

Optimized for qPCR-based assays

Lyo-ready LibertyTaq DNA Polymerase has been formulated to support sensitive and reproducible qPCR results from a wide range of template DNA amounts (Figures 1 and 2), making it an ideal enzyme for qPCR- and RT-qPCR-based assays. The enzyme is produced under tightly controlled manufacturing conditions to help ensure that the formulation is free of contaminating DNA, to enable specific and reliable results.

To learn more about lyo-ready LibertyTaq DNA Polymerase, contact our License and Commercial Supply team at thermofisher.com/oem-partner

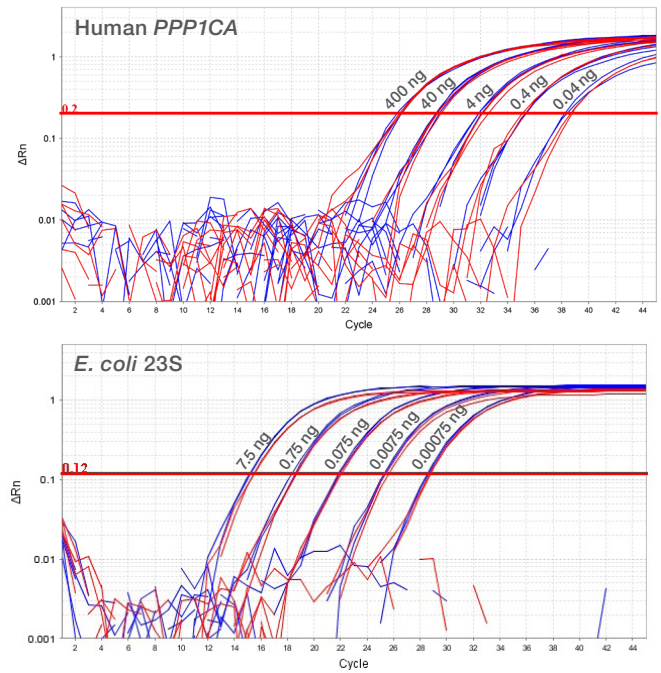


Figure 2. Stability of LibertyTaq DNA Polymerase under different shipping conditions. To mimic different shipping and storage conditions, Lyo-ready LibertyTaq DNA Polymerase was subjected to $-70^{\circ}\text{C}/-20^{\circ}\text{C}$ (3 cycles) prior to its use in human *PPP1CA* TaqMan Assays, and 20 freeze/thaw cycles prior to its use in *E. coli* 23S TaqMan Assays (blue curves). Performance was compared to that of lyo-ready LibertyTaq DNA Polymerase stored at -20°C (red curves). Multiple freezing and thawing cycles did not affect the enzyme's performance.

High stability for reliable results

Due to a stringent manufacturing process and an optimized enzyme formulation, lyo-ready LibertyTaq DNA Polymerase exhibits high stability and tolerance under different shipping and storage conditions. The polymerase has the same optimal performance even after multiple freeze/thaw cycles (Figure 2), offering consistent and reproducible assays upon delivery to end users.

Cost-effective formulation

Lyo-ready LibertyTaq DNA Polymerase has been developed to offer optimal qPCR performance, and designed to be free of third-party intellectual property, providing an efficient and cost-effective solution for lyophilized qPCR assays.

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