

## Certificate of Analysis

**Product Name:** 2X Taq PCR Master Mix (with dye)  
**Cat. No.:** K1034  
**Batch No.:** 26001

### Physical and Chemical Properties

**Production Date:** Feb. 26 2026  
**Expiration Date:** Feb. 26 2028  
**Storage:** -20°C.

### Analytical Data

**Endonuclease Activity (Nicking):**

A 50 µL reaction in PCR Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 20 units of Taq DNA Polymerase incubated for 4 hours at either 37°C or 75°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Pass

**Non-Specific DNase Activity (16 hour, Buffer):**

A 50 µL reaction in 1X Taq PCR Master Mix containing 1 µg of T3 DNA in addition to a reaction containing Lambda-HindIII DNA incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Pass

**PCR Amplification (5 kb Lambda, Master Mix):**

A 25 µL reaction in Taq PCR Master Mix and 0.2 µM primers containing 5 ng Lambda DNA for 25 cycles of PCR amplification results in the expected 5 kb product.

Pass

**Phosphatase Activity (pNPP):**

A 200 µL reaction in 1M Diethanolamine, pH 9.8, 0.5 mM, MgCl<sub>2</sub> containing 2.5 mM p-Nitrophenyl Phosphate (pNPP) and a minimum of 100 units of Taq DNA Polymerase incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.

Pass

**Protein Purity Assay (SDS-PAGE):**

Taq DNA Polymerase is ≥ 99% pure as determined by SDS-PAGE

Pass

analysis using Coomassie Blue detection.

**qPCR DNA Contamination (E. coli Genomic):**

A minimum of 5 units of Taq DNA Polymerase is screened for the presence of E. coli genomic DNA using SYBR Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is  $\leq 1$  E. coli genome.

Pass

Signed by: Aiqun Li  
Quality Assurance

**Caution**

**FOR RESEARCH PURPOSES ONLY.**  
**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**



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