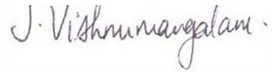
Certificate of Analysis

Verified by:
Jyothi Vishumangalam

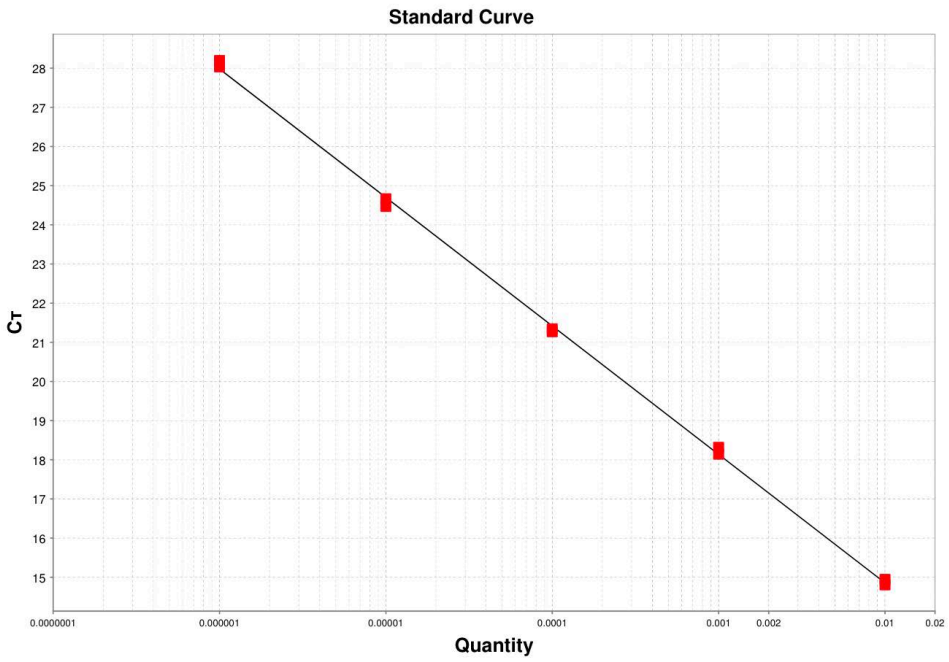


Quality Release date:
Jun 20, 2017

Chai Biotechnologies Inc.
Santa Clara, CA
Phone: +1 (650) 779-5577

Product Name:	**PCR Master Mix + Hot Start DRY**
Catalog Num:	R02160
Lot Num:	6333575
Analysis Date:	June 20, 2017
Expiration Date:	June 20, 2019
Storage:	Store at -20 °C

Test Specification	Results
Lambda Assay	
Efficiency and R^2 was determined using a five-point Standard Curve with ten-fold serial dilutions of lambda phage genomic DNA as template. An amplicon of 200 bp was amplified using cycling conditions of 2 min @ 95 °C, 40 x (15 s @ 95 °C, 60 s @ 60 °C). The efficiency is specified to be between 90-110% and R2 ≥ 0.99.	PASS
Endonuclease Activity	
Absence of endonuclease activity was determined by incubation of *E. coli* amplified DNA with 25 U Taq polymerase at 37 °C for five hours and monitored for little or no decrease in original amount of amplicon when resolved by agarose gel electrophoresis.	PASS
Hot Start Activity (Primer-Dimer Assay)	
Hot Start ability of Taq Polymerase was tested with primers for amplifying a TAT gene using human genomic DNA as background with low concentrations of TAT gene synthetic DNA as template. The reaction mix containing all components and another reaction lacking the TAT gene synthetic DNA template was incubated at room temperature for at least an hour following which the reaction was amplified using cycling conditions of 2 min @ 95 °C, 40 x (1 min @ 95 °C, 1 min @ 64 °C. The products were resolved by agarose gel electrophoresis on a 2% gel. Decreased primer dimer formation and decreased non-specific amplification using Hot Start Master Mix compared to non-Hot-Start Taq polymerase containing master mix was monitored.	PASS



Lambda Assay

$y = -3.281 (x) + 8.295$, $R^2 = 0.999$