



Certificate of Analysis

Verified by:
Eric Napier

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Chai Inc.
Santa Clara, CA 95050
Phone: +1 (650) 779-5577

Product Name: **Sahara One-Step RT-qPCR Master Mix with UNG**

Catalog Num: R02311

Lot Num: 4587920

Expiration Date: May 12, 2024

Storage: Store at -20 °C

Master Mix Tests

Result

RT-qPCR Functional And Performance Assay

PASS

A quantitative detection of log-fold serial dilutions of a control RNA as template. Linear regression analysis of quantification cycle (C_q) versus log input quantity must give an amplification efficiency between 93 – 107% and coefficient of determination (R^2) ≥ 0.995 . The master mix must also have a consistent C_q for a fixed concentration RNA template.

PCR Carry-Over Digestion Functional Assay

PASS

A quantitative detection of log-fold serial dilutions of a control amplicon as template in presence and absence of Uracil-DNA Glycosylase (UNG). Absolute value of C_q with and without UNG was monitored. UNG must result in a significant shift in C_q (≥ 8), or no amplification.

Cofactor Buffer Tests

Result

Physical Appearance

PASS

Cofactor Buffer must have a clear, colorless to slightly pink appearance.

Cofactor Buffer Performance Test

PASS

Performance of the Cofactor Buffer is evaluated through RT-qPCR amplification of a control RNA template. The cofactor buffer must have a consistent C_q for a fixed concentration RNA template.

ROX Reference Dye Tests	Result
ROX Emission Spectrum Test	PASS
<p>Fluorescence emission spectrum of ROX reference dye was measured at 1 nm intervals, at a scan speed of 6,000 nm/min using 580 nm excitation wavelength. The peak emission wavelength must fall within 600 ± 5 nm.</p>	
ROX Performance Test	PASS
<p>ROX reference dye was incorporated into a duplex assay set up using a five-point standard curve with ten-fold serial dilutions of two DNA templates. The efficiency for both targets must fall between 90 – 110% and $R^2 \geq 0.99$.</p>	