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New England Biolabs Certificate of Analysis

Product Name: OneTaq® Hot Start Quick-Load® 2X Master Mix with GC Buffer

Catalog #: M0489S/L
Concentration: 2X Concentrate
Lot #: 0271706
Assay Date: 06/2017
Expiration Date: 6/2019
Storage Temp: -20°C

Composition (1X): 80 mM Tris-SO₄ (pH 9.2 @ 25°C), 20 mM (NH₄)₂SO₄, 2 mM MgSO₄, 0.2 mM dATP, 0.2 mM dCTP, 0.2 mM

dGTP, 0.2 mM dTTP, 5 % Glycerol, 5 % DMSO, 0.06 % IGEPAL® CA-630, 0.05 % Tween® 20, 1 X Xylene cyanol, 1

X Tartrazine, 25 units/ml One Taq ${\mathbb R}$ Hot Start DNA Polymerase

Specification Version: PS-M0489S/L v1.0
Effective Date: 10 May 2017

Assay Name/Specification (minimum release criteria)	Lot #0271706
Inhibition of Primer Extension (Hot Start, Radioactivity Incorporation) - A 50 μl primer extension assay in ThermoPol® Reaction Buffer in the presence of 200 μM dNTPs including [³ H]-dTTP, containing 15 nM primed single-stranded M13mp18 with 2.5 units of One <i>Taq</i> ® Hot Start DNA Polymerase incubated for 16 hours at 25°C yields >95% inhibition when compared to a non-hot start control reaction.	Pass
Non-Specific DNase Activity (16 hour, Buffer) - A 50 µl reaction in 1X One Taq® Hot Start Quick-Load® Master Mix with GC Buffer 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 (Buffer Dependent, >65% GC-rich, Master Mix) - A 25 μl reaction in 1X One <i>Taq</i> ® Hot Start Quick-Load® Master Mix with GC Buffer and 0.2 μM primers containing 10 ng Human Genomic DNA for 30 cycles of PCR amplification results in the buffer-dependent production of the 737 bp product.	Pass
PCR Amplification (Enhancer Dependent, >70% GC-rich, Master Mix) - A 25 μl reaction in 1X One <i>Taq</i> ® Hot Start Quick-Load® Master Mix with GC Buffer and 20% One <i>Taq</i> ® High GC Enhancer in the presence of 0.2 μM primers containing 10 ng Human Genomic DNA for 30 cycles of PCR amplification results in the enhancer-dependent production of the 627 bp product.	Pass









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Assay Name/Specification (minimum release criteria)	Lot #0271706
PCR Amplification (Hot Start 2 kb Lambda DNA) - A 25 μl reaction in One <i>Taq</i> ® Standard Reaction Buffer in the presence of 200 μM dNTPs and 0.2 μM primers containing 10 pg Lambda DNA and 50 ng Human Genomic DNA with 0.625 units of One <i>Taq</i> ® Hot Start DNA Polymerase for 30 cycles of PCR amplification results in an increase in yield of the 2 kb Lambda product and a decrease in non-specific genomic bands when compared to a non-hot start control reaction.	Pass
RNase Activity (Extended Digestion) - A 10 μ l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 μ l of One Taq ® Hot Start Quick-Load® 2X Master Mix with GC Buffer is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass

Authorized by Karen Moreira 10 May 2017

nga.
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Registered
Quality





Inspected by
Tony Spear-Alfonso

21 Jun 2017