

New England Biolabs Product Specification

Product Name: Control LAMP Primer Mix (rActin)
Catalog #: S0164B
Concentration: 10X Concentrate
Shelf Life: 24 months
Storage Temp: -20°C
Composition (1X): Proprietary
Specification Version: PS-S0164B v2.0
Effective Date: 03 Mar 2022

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 5 µl of Control LAMP Primer Mix (rActin) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Functional Testing (LAMP primers) - A 25 µl reaction in 1X WarmStart® LAMP Master Mix with UDG in the presence of LAMP Fluorescent Dye and 1X Control LAMP Primer Mix (rActin) containing 10 ng human RNA results in a threshold time of ≤ 20 minutes as determined by fluorescent detection. Reactions that lack human RNA template remain negative over a 30 minute incubation at 65°C.

Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in NEBuffer 2 containing 1 µg of T3 or T7 DNA in addition to a reaction containing Lambda-HindIII DNA and a minimum of 5 µl of Control LAMP Primer Mix (rActin) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Phosphatase Activity (pNPP) - A 200 µl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl₂ containing 2.5 mM *p*-Nitrophenyl Phosphate (pNPP) and a minimum of 20 µl of Control LAMP Primer Mix (rActin) incubated for 4 hours at 37°C yields <0.0001 unit of alkaline phosphatase activity as determined by spectrophotometric analysis.

RNase Activity (Extended Digestion) - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Control LAMP Primer Mix (rActin) is incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.

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