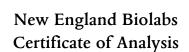
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Tel 978-927-5054

Fax 978-921-1350

Product Name: phi29 DNA Polymerase

M0269S/L Catalog #: Concentration: 10,000 units/ml

NEW ENGLAND BioLabs Inc.

Unit Definition: One unit is defined as the amount of enzyme that will incorporate 0.5 pmol of dNTP into acid insoluble material in 10 minutes

at 30°C.

Lot #: 0131512 Assay Date: 12/2015 Expiration Date: 12/2017 Storage Temp: -20°C

Storage Buffer: 100 mM KCl, 10 mM Tris-HCl (7.4), 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 0.5 % Tween-20, 0.5 % IgepalCA-

Specification Version: PS-M0269S/L v1.0 Effective Date: 19 Nov 2014

Assay Name/Specification (minimum release criteria)	Lot #0131512
Endonuclease Activity (Nicking) - A 50 μl reaction in phi29 DNA Polymerase Reaction Buffer containing 1 μg of supercoiled ΦΧ174 DNA and a minimum of 100 units of phi29 DNA Polymerase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Phosphatase Activity (pNPP) - A 200 μl reaction in 1M Diethanolamine, pH 9.8, 0.5 mM MgCl ₂ containing 2.5 mM <i>p</i> -Nitrophenol Phosphate (pNPP) and a minimum of 100 units phi29 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) - phi29 DNA Polymerase is ≥ 98% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
qPCR DNA Contamination (<i>E. coli</i> Genomic) - A minimum of 10 units of phi29 DNA Polymerase is screened for the presence of <i>E. coli</i> genomic DNA using SYBR® Green qPCR with primers specific for the <i>E. coli</i> 16S rRNA locus. Results are quantified using a standard curve generated from purified <i>E. coli</i> genomic DNA. The measured level of <i>E. coli</i> genomic DNA contamination is ≤ 1 <i>E. coli</i> genome.	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 phi29 DNA Polymerase 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.	Pass









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New England Biolabs Certificate of Analysis

Assay Name/Specification (minimum release criteria)	Lot #0131512
Specific Activity - The Specific Activity of phi29 DNA Polymerase is between 180,000 units/mg and 280,000 units/mg.	Pass

Authorized by Melanie Fortier 19 Nov 2014







Inspected by Cathy Rezac
13 Nov 2015