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New England Biolabs Product Specification

Product Name: TelN Protelomerase

Catalog #: M0651S

Concentration: 5,000 units/ml

Unit Definition: One unit is defined as the amount of enzyme required to digest 0.5 µg of pMiniT-TelRL BsaI-linearized DNA in 30

minutes at 30°C in a total reaction volume of 50 μ l.

Shelf Life: 12 months
Storage Temp: -20°C

Storage Conditions: 100 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.4 @ 25°C)

Specification Version: PS-M0651S v2.0
Effective Date: 13 Jun 2018

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Circular Single Stranded DNA) - A 50 μ l reaction in ThermoPol® Reaction Buffer containing 1 μ g of M13mp18 Single-stranded DNA and a minimum of 25 units of TelN Protelomerase incubated for 4 hours at 37°C results in <20% conversion to linear DNA as determined by agarose gel electrophoresis.

Endonuclease Activity (Nicking) - A 50 μ l reaction in ThermoPol® Reaction Buffer containing 1 μ g of supercoiled PhiX174 DNA and a minimum of 50 units of TelN Protelomerase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.

Exonuclease Activity (Radioactivity Release) - A 50 μ l reaction in ThermoPol® Reaction Buffer containing 1 μ g of a mixture of single and double-stranded [3 H] *E. coli* DNA and a minimum of 25 units of TelN Protelomerase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

Functional Testing (Covalent End Integrity) - A 50 μ l reaction in ThermoPol® Reaction Buffer containing 0.5 μ g of pMiniT-TelRL DNA and 5 units TelN Protelomerase incubated for 30 minutes at 30°C followed by heat inactivation and the subsequent addition of 10 units of T5 exonuclease incubated for 1 hour at 37°C results in \leq 10% loss of starting material as determined by agarose gel electrophoresis.

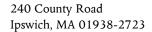
Non-Specific DNase Activity (16 Hour) - A 50 μ l reaction in ThermoPol® Reaction Buffer containing 1 μ g of HaeIII digested PhiX174 RF I DNA and a minimum of 50 units of TelN Protelomerase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

Protein Purity Assay (SDS-PAGE) - TelN Protelomerase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.









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NEW ENGLAND
BioLabs Inc.

Date 13 Jun 2018

Derek Robinson Director of Quality Control





