

New England Biolabs Product Specification

<i>Product Name:</i>	<i>TelN Protelomerase</i>
<i>Catalog #:</i>	<i>M0651S</i>
<i>Concentration:</i>	<i>5,000 units/ml</i>
<i>Unit Definition:</i>	<i>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 µl.</i>
<i>Shelf Life:</i>	<i>12 months</i>
<i>Storage Temp:</i>	<i>-20°C</i>
<i>Storage Conditions:</i>	<i>100 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.4 @ 25°C)</i>
<i>Specification Version:</i>	<i>PS-M0651S v2.0</i>
<i>Effective Date:</i>	<i>13 Jun 2018</i>

Assay Name/Specification (minimum release criteria)

Endonuclease Activity (Circular Single Stranded DNA) - A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg 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 µl reaction in ThermoPol® Reaction Buffer containing 1 µg 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 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] *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 µl reaction in ThermoPol® Reaction Buffer containing 0.5 µg 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 ≤ 10% loss of starting material as determined by agarose gel electrophoresis.

Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg 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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Date 13 Jun 2018

Derek Robinson
Director of Quality Control

