

## New England Biolabs Certificate of Analysis

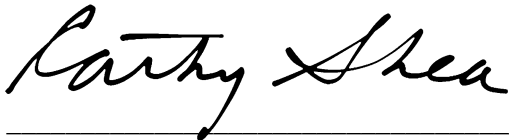
**Product Name:** *TeIN Protelomerase*  
**Catalog Number:** *M0651S*  
**Concentration:** *5,000 U/ml*  
**Unit Definition:** *One unit is defined as the amount of enzyme required to digest 0.5 µg of pMiniT-TeIRL BsaI-linearized DNA in 30 minutes at 30°C in a total reaction volume of 50 µl.*  
**Lot Number:** *10021337*  
**Expiration Date:** *09/2019*  
**Storage Temperature:** *-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*

TeIN Protelomerase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0651SVIAL	TeIN Protelomerase	10014088	Pass
B9004SVIAL	ThermoPol® Reaction Buffer Pack	0031712	Pass

Assay Name/Specification	Lot # 10021337
<p><b>Endonuclease Activity (Circular Single Stranded DNA)</b>            A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of M13mp18 Single-stranded DNA and a minimum of 25 units of TeIN Protelomerase incubated for 4 hours at 37°C results in &lt;20% conversion to linear DNA as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of TeIN Protelomerase incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 µl reaction in ThermoPol® Reaction Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 25 units of TeIN Protelomerase incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass

Assay Name/Specification	Lot # 10021337
<p><b>Functional Testing (Covalent End Integrity)</b> 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.</p>	<b>Pass</b>
<p><b>Non-Specific DNase Activity (16 Hour)</b> 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.</p>	<b>Pass</b>
<p><b>Protein Purity Assay (SDS-PAGE)</b> TelN Protelomerase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<b>Pass</b>

This product has been tested and shown to be in compliance with all specifications.



Cathy Shea  
Production Scientist  
18 Sep 2018



Michael Tonello  
Packaging Quality Control Inspector  
27 Sep 2018