

## New England Biolabs Certificate of Analysis

*Product Name:* TelN Resolvase  
*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 µl.  
*Lot #:* 0031707  
*Assay Date:* 07/2017  
*Expiration Date:* 07/2018  
*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 v1.0  
*Effective Date:* 15 Feb 2017

Assay Name/Specification (minimum release criteria)	Lot #0031707
<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 TelN Resolvase incubated for 4 hours at 37°C results in <20% conversion to linear DNA as determined by agarose gel electrophoresis.	<b>Pass</b>
<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 TelN Resolvase incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	<b>Pass</b>
<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] <i>E. coli</i> DNA and a minimum of 25 units of TelN Resolvase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	<b>Pass</b>
<b>Functional Testing (Covalent End Integrity)</b> - A 30 µl reaction in CutSmart® Buffer containing 0.5 µg of pMiniT-TelRL DNA and 5 units TelN Resolvase 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.	<b>Pass</b>
<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 Resolvase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	<b>Pass</b>

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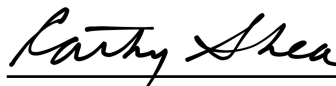
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<b>Assay Name/Specification</b> (minimum release criteria)	<b>Lot #0031707</b>
<b>Protein Purity Assay (SDS-PAGE)</b> - TelN Resolvase is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	<b>Pass</b>



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Authorized by  
Derek Robinson  
15 Feb 2017



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Inspected by  
Cathy Shea  
20 Jul 2017

