

## New England Biolabs Certificate of Analysis

**Product Name:** TspMI  
**Catalog Number:** R0709S  
**Concentration:** 5,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of pUCAdeno plasmid DNA in 1 hour at 75°C in a total reaction volume of 50 µl.  
**Lot Number:** 10031974  
**Expiration Date:** 06/2019  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 20 mM Tris-HCl (pH 8.0), 1 mM DTT, 1 mM EDTA, 50% Glycerol, 0.10% Triton X-100, 200 µg/ml BSA  
**Specification Version:** PS-R0709S/L v1.0

TspMI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0709SVIAL	TspMI	10032942	Pass
B7204SVIAL	CutSmart® Buffer	10031557	Pass

Assay Name/Specification	Lot # 10031974
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pUCAdeno DNA and a minimum of 5 Units of TspMI incubated for 16 hours at 75°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 10-fold over-digestion of pUCAdeno DNA with TspMI, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 25°C. Of these ligated fragments, &gt;75% can be recut with TspMI.</p>	Pass
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 5 Units of TspMI incubated for 4 hours at 75°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 CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 50 units of TspMI incubated for 4</p>	Pass

Assay Name/Specification	Lot # 10031974
hours at 75°C releases <0.1% of the total radioactivity.	

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



Tony Spear-Alfonso  
Production Scientist  
10 Dec 2018



Josh Hersey  
Packaging Quality Control Inspector  
28 Dec 2018