

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 pBC4 plasmid DNA in 1 hour at 75°C in a total reaction volume of 50 µl.
Packaging Lot Number: 10165500
Expiration Date: 04/2023
Storage Temperature: -20°C
Storage Conditions: 20 mM Tris-HCl, 300 mM NaCl, 1 mM DTT, 1 mM EDTA, 50% Glycerol, 0.10% Triton® X-100, 200 µg/ml BSA, (pH 8.0 @ 25C)
Specification Version: PS-R0709S/V v2.0

TspMI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0709SVIAL	TspMI	10165499	Pass
B6004SVIAL	rCutSmart™ Buffer	10161524	Pass

Assay Name/Specification	Lot # 10165500
Endonuclease Activity (Nicking) 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 <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 50 units of TspMI incubated for 4 hours at 75°C releases <0.1% of the total radioactivity.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of pBC4 DNA with TspMI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 25°C. Of these ligated fragments, ≥75% can be recut with TspMI.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of pBC4 DNA and a minimum of 5 units of TspMI incubated for 16 hours at 75°C results in a DNA pattern free of	Pass

Assay Name/Specification	Lot # 10165500
detectable nuclease degradation as determined by agarose gel electrophoresis.	

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

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YunJie Sun
Production Scientist
12 Oct 2022



Michael Tonello
Packaging Quality Control Inspector
12 Oct 2022