New England BioLabs Inc.

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stay GENUINE

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New England Biolabs
Certificate of Analysis

Product Name:	*Tsp45I*
Catalog Number:	*R0583S*
Concentration:	*10,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 65°C in a total reaction volume of 50 µl.*
Packaging Lot Number:	*10122853*
Expiration Date:	*09/2023*
Storage Temperature:	*-20°C*
Storage Conditions:	*20 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton X-100, 200 µg/ml BSA*
Specification Version:	*PS-R0583S/L v1.0*

Tsp45I Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
R0583SVIAL	Tsp45I	10122852	**Pass**
B6004SVIAL	rCutSmart™ Buffer	10123108	**Pass**

Assay Name/Specification	Lot # 10122853
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with Tsp45I, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16ºC. Of these ligated fragments, >95% can be recut with Tsp45I.	**Pass**
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 15 units of Tsp45I incubated for 4 hours at 65ºC releases <0.1% of the total radioactivity.	**Pass**
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 15 Units of Tsp45I incubated for 16 hours at 65ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

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Production Scientist
14 Oct 2021

Josh Hersey
Packaging Quality Control Inspector
14 Oct 2021