New England BioLabs Inc.

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drive DISCOVERY
stay GENUINE

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New England Biolabs
Certificate of Analysis

Product Name:	*Tsp45I*
Catalog Number:	*R0583L*
Concentration:	*5,000 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.*
Lot Number:	*10028797*
Expiration Date:	*11/2020*
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*

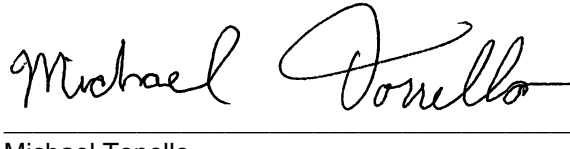| Tsp45I Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
R0583LVIAL	Tsp45I	10028798	**Pass**
B7204SVIAL	CutSmart® Buffer	10021120	**Pass**

Assay Name/Specification	Lot # 10028797
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**
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**
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.

nqa. ISO 9001 Registered Quality Management
nqa. ISO 13485 Registered Medical Devices
nqa. ISO 14001 Registered Environmental Management

R0583L / Lot: 10028797
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Tony Spear-Alfonso
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02 Nov 2018

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21 Nov 2018