

New England Biolabs Certificate of Analysis

Product Name: Tsp45I
Catalog Number: R0583S
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: 10011894
Expiration Date: 06/2020
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
R0583SVIAL	Tsp45I	10011895	Pass
B7204SVIAL	CutSmart® Buffer	3081804	Pass

Assay Name/Specification	Lot # 10011894
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 15 units of Tsp45I incubated for 4 hours at 65°C 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 65°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	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 16°C. Of these ligated fragments, >95% can be recut with Tsp45I.	Pass

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



Jianying Luo
Production Scientist
28 Jun 2018



Josh Hersey
Packaging Quality Control Inspector
02 Jul 2018