

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: 10011892
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
R0583LVIAL	Tsp45I	10011893	Pass
B7204SVIAL	CutSmart® Buffer	10010634	Pass

Assay Name/Specification	Lot # 10011892
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.



Tony Spear-Alfonso
Production Scientist
13 Jun 2018



Josh Hersey
Packaging Quality Control Inspector
02 Jul 2018