

## New England Biolabs Certificate of Analysis

**Product Name:** *SapI*  
**Catalog Number:** R0569L  
**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 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10059020  
**Expiration Date:** 07/2021  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA  
**Specification Version:** PS-R0569S/L v1.0

SapI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0569LVIAL	SapI	10049308	Pass
B7204SVIAL	CutSmart® Buffer	10055736	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10053980	Pass

Assay Name/Specification	Lot # 10059020
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled LITMUS38i DNA and a minimum of 10 units of SapI incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> SapI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 30 Units of SapI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of Lambda DNA with SapI, >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 SapI.	Pass

Assay Name/Specification	Lot # 10059020
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 30 units of SapI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	<b>Pass</b>

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



Stephanie Cornelio  
Production Scientist  
16 Jul 2019



Michael Tonello  
Packaging Quality Control Inspector  
05 Dec 2019