

New England Biolabs Certificate of Analysis

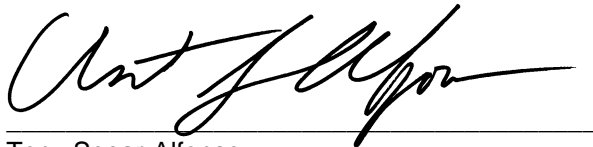
Product Name: *SacI*
Catalog Number: *R0156M*
Concentration: *100,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (HindIII digest) in 1 hour at 37°C in a total reaction volume of 50 µl.*
Lot Number: *10011641*
Expiration Date: *06/2020*
Storage Temperature: *-20°C*
Storage Conditions: *100 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA*
Specification Version: *PS-R0156M v1.0*

| SacI Component List | | | |
|---------------------|------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| R0156M VIAL | SacI | 10011642 | Pass |
| B7201S VIAL | NEBuffer™ 1.1 | 0121709 | Pass |
| B7024S VIAL | Gel Loading Dye, Purple (6X) | 10011266 | Pass |

| Assay Name/Specification | Lot # 10011641 |
|--|----------------|
| Blue-White Screening (Terminal Integrity) A sample of LITMUS28i vector linearized with a 10-fold excess of SacI, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies. | Pass |
| Endonuclease Activity (Nicking) A 50 µl reaction in NEBuffer 1.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 20 units of SacI incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis. | Pass |
| Exonuclease Activity (Radioactivity Release) A 50 µl reaction in NEBuffer 1.1 containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 100 units of SacI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass |
| Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of pXba DNA with SacI, >95% of the DNA fragments can | Pass |

| Assay Name/Specification | Lot # 10011641 |
|--|----------------|
| <p>be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with SacI.</p> | |
| <p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in NEBuffer 1.1 containing 1 µg of Lambda-HindIII DNA and a minimum of 60 units of SacI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | Pass |
| <p>Protein Purity Assay (SDS-PAGE) SacI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p> | Pass |

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



Tony Spear-Alfonso
Production Scientist
06 Jun 2018



Michael Tonello
Packaging Quality Control Inspector
04 Sep 2018