

## New England Biolabs Certificate of Analysis

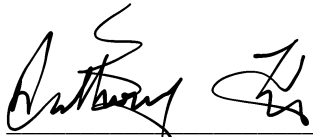
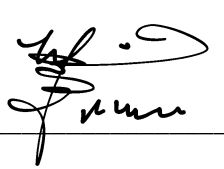
**Product Name:** *Sau3AI*  
**Catalog Number:** *R0169S*  
**Concentration:** *5,000 U/ml*  
**Unit Definition:** *One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.*  
**Lot Number:** *10012460*  
**Expiration Date:** *06/2020*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA*  
**Specification Version:** *PS-R0169S/L v1.0*

| Sau3AI Component List |                       |            |                      |
|-----------------------|-----------------------|------------|----------------------|
| NEB Part Number       | Component Description | Lot Number | Individual QC Result |
| R0169SVIAL            | Sau3AI                | 10012461   | Pass                 |
| B7201SVIAL            | NEBuffer™ 1.1         | 0131803    | Pass                 |
| B7201SVIAL            | NEBuffer™ 1.1         | 0121709    | Pass                 |

| Assay Name/Specification  | Lot # 10012460 |
|---|----------------|
| <b>Protein Purity Assay (SDS-PAGE)</b><br>Sau3AI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.  | Pass           |
| <b>Endonuclease Activity (Nicking)</b><br>A 50 µl reaction in NEBuffer 1.1 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 5 Units of Sau3AI incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.            | Pass           |
| <b>Exonuclease Activity (Radioactivity Release)</b><br>A 50 µl reaction in NEBuffer 1.1 containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 15 units of Sau3AI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>After a 20-fold over-digestion of Lambda DNA with Sau3AI, ~75% 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 Sau3AI.                                   | Pass           |

| Assay Name/Specification   | Lot # 10012460     |
|--|--------------------|
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>A 50 µl reaction in NEBuffer 1.1 containing 1 µg of Lambda DNA and a minimum of 25 Units of Sau3AI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | <p><b>Pass</b></p> |

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


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Anthony Francis  
Production Scientist  
03 Jul 2018

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Packaging Quality Control Inspector  
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