

New England Biolabs Certificate of Analysis

Product Name: *SacII*
Catalog Number: *R0157S*
Concentration: *20,000 U/ml*
Unit Definition: *One unit is defined as the amount of enzyme required to digest 1 µg of pXba DNA in 1 hour at 37°C in a total reaction volume of 50 µl.*
Packaging Lot Number: *10065417*
Expiration Date: *01/2022*
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-R0157S/L v1.0*

SacII Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0157SVIAL	SacII	10064175	Pass
B7204SVIAL	CutSmart® Buffer	10068803	Pass
B7024SVIAL	Gel Loading Dye, Purple (6X)	10059231	Pass


Assay Name/Specification	Lot # 10065417
<p>Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 60 Units of SacII incubated for 4 hours at 37°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p>Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of SacII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.</p>	Pass
<p>Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of pXba DNA with SacII, >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 SacII.</p>	Pass
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pXba DNA and a minimum of 60 Units of SacII incubated for 16 hours at 37°C results in a DNA pattern free of</p>	Pass

Assay Name/Specification	Lot # 10065417
detectable nuclease degradation as determined by agarose gel electrophoresis.	

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



Anthony Francis
Production Scientist
13 Jan 2020



Michael Tonello
Packaging Quality Control Inspector
09 Mar 2020