

## New England Biolabs Certificate of Analysis

**Product Name:** Cac8I  
**Catalog Number:** R0579L  
**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.  
**Packaging Lot Number:** 10150188  
**Expiration Date:** 05/2023  
**Storage Temperature:** -80°C  
**Storage Conditions:** 150 mM KCl , 10 mM Tris-HCl (7.4), 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol , 0.10 % TritonX-100  
**Specification Version:** PS-R0579S/L v3.0

Cac8I Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0579LVIAL	Cac8I	10150187	Pass
B6004SVIAL	rCutSmart™ Buffer	10153337	Pass

Assay Name/Specification	Lot # 10150188
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 5-fold over-digestion of Lambda DNA with Cac8I, ~75% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with Cac8I.</p>	Pass
<p><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 25 units of Cac8I 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><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 15 units of Cac8I incubated for 4 hours at 37°C releases &lt;0.2% of the total radioactivity.</p>	Pass

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

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08 Jul 2022



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