

## 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:** *10069755*  
**Expiration Date:** *03/2022*  
**Storage Temperature:** *-20°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	10069754	Pass
B7204SVIAL	CutSmart® Buffer	10061305	Pass

Assay Name/Specification	Lot # 10069755
<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 <0.2% of the total radioactivity.	Pass
<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, >95% can be recut with Cac8I.	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 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.	Pass

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

*Stephanie Cornelio*

Stephanie Cornelio  
Production Scientist  
05 Mar 2020

*Jay Minichiello*

Jay Minichiello  
Packaging Quality Control Inspector  
06 Mar 2020