

## New England Biolabs Certificate of Analysis

**Product Name:** *Cac8I*  
**Catalog #:** *R0579S/L*  
**Concentration:** *5,000 units/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 #:** *0271510*  
**Assay Date:** *10/2015*  
**Expiration Date:** *10/2017*  
**Storage Temp:** *-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 v2.0*  
**Effective Date:** *04 Aug 2015*

Assay Name/Specification (minimum release criteria)	Lot #0271510
<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] <i>E. coli</i> DNA and a minimum of 15 units of Cac8I incubated for 4 hours at 37°C releases <0.2% of the total radioactivity.	<b>Pass</b>
<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 25°C. Of these ligated fragments, >95% can be recut with Cac8I.	<b>Pass</b>
<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.	<b>Pass</b>



Authorized by  
Derek Robinson  
04 Aug 2015



Inspected by  
Casey Madinger  
10 Nov 2015

