New England BioLabs Inc.

be INSPIRED
drive DISCOVERY
stay GENUINE

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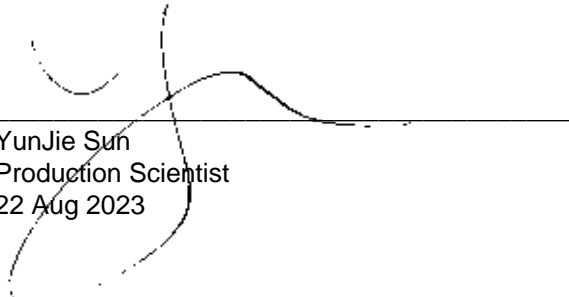
www.neb.com
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New England Biolabs
Certificate of Analysis

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:	*10205503*
Expiration Date:	*08/2024*
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	10205502	**Pass**
B6004SVIAL	rCutSmart™ Buffer	10198644	**Pass**

Assay Name/Specification	Lot # 10205503
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 15 units of Cac8I incubated for 4 hours at 37ºC releases <0.2% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) 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 16ºC. Of these ligated fragments, >95% can be recut with Cac8I.	**Pass**
Non-Specific DNase Activity (16 Hour) 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 37ºC 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.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

nqa. ISO 9001 Registered Quality Management
nqa. ISO 13485 Registered Medical Devices
nqa. ISO 14001 Registered Environmental Management

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YunJie Sun
Production Scientist
22 Aug 2023

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Josh Hersey
Packaging Quality Control Inspector
25 Aug 2023