NEW ENGLAND BioLabs Inc.
be INSPIRED drive DISCOVERY stay GENUINE
240 County Road
Ipswich, MA 01938-2723
Tel 978-927-5054
Fax 978-921-1350
www.neb.com
info@neb.com

New England Biolabs
Certificate of Analysis

Product Name:	*KasI*
Catalog Number:	*R0544L*
Concentration:	*5,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to digest 1 µg of pBR322 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.*
Packaging Lot Number:	*10082395*
Expiration Date:	*09/2021*
Storage Temperature:	*-20°C*
Storage Conditions:	*500 mM KCl, 20 mM Tris-HCl (pH 7.0), 0.1 mM EDTA, 1mM MgCl2, 50% Glycerol, 0.10% Triton X-100, 200 µg/ml BSA*
Specification Version:	*PS-R0544S/L v2.0*

KasI Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
R0544LVIAL	KasI	10081962	**Pass**
B7204SVIAL	CutSmart® Buffer	10081171	**Pass**

Assay Name/Specification	**Lot # 10082395**
Protein Purity Assay (SDS-PAGE) KasI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	**Pass**
Blue-White Screening (Terminal Integrity) A sample of LITMUS38i vector linearized with a 10-fold excess of KasI, religated and transformed into an E. coli strain expressing the LacZ beta fragment gene results in <1% white colonies.	**Pass**
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 5 units of KasI incubated for 4 hours at 37ºC releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) After a 20-fold over-digestion of pBR322 DNA with KasI, >95% 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 KasI.	**Pass**
Non-Specific DNase Activity (16 Hour)	**Pass**

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Assay Name/Specification	Lot # 10082395
A 50 µl reaction in CutSmart™ Buffer containing 1 µg of pBR322 DNA and a minimum of 5 Units of KasI incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	

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.

Penghua Zhang
Production Scientist
22 Oct 2020

Michael Tonello
Packaging Quality Control Inspector
22 Oct 2020