

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.*
Lot Number: *10042945*
Expiration Date: *04/2020*
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	10042946	Pass
B7204SVIAL	CutSmart® Buffer	10042964	Pass

Assay Name/Specification	Lot # 10042945
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 37°C 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 16°C. Of these ligated fragments, >95% can be recut with KasI.	Pass
Non-Specific DNase Activity (16 Hour) 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 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

Assay Name/Specification	Lot # 10042945
Protein Purity Assay (SDS-PAGE) KasI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass

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



Stephanie Cornelio
Production Scientist
23 Apr 2019



Michael Tonello
Packaging Quality Control Inspector
21 May 2019