

## New England Biolabs Certificate of Analysis

**Product Name:** *KasI*  
**Catalog #:** *R0544S/L*  
**Concentration:** *5,000 units/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 #:** *0421303*  
**Assay Date:** *03/2013*  
**Expiration Date:** *03/2014*  
**Storage Temp:** *-20 °C*  
**Storage Conditions:** *500 mM KCl, 20 mM Tris-HCl (pH 7.0), 0.1 mM EDTA, 1mM MgCl<sub>2</sub>, 50% Glycerol, 0.10% Triton X-100, 200 µg/ml BSA*  
**Specification Version:** *PS-R0544S/L v1.0*  
**Effective Date:** *23 May 2013*

Assay Name/Specification (minimum release criteria)	Lot #0421303
<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 5 units of KasI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	<b>Pass</b>
<b>Ligation and Recutting (Terminal Integrity)</b> - 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.	<b>Pass</b>
<b>Non-Specific DNase Activity (16 Hour)</b> - 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.	<b>Pass</b>
<b>Protein Purity Assay (SDS-PAGE)</b> - KasI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	<b>Pass</b>

\* The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (# R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.



Authorized by  
Derek Robinson  
23 May 2013



Inspected by  
Stephanie Doucette  
23 May 2013

