

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 #: *0451708*
Assay Date: *08/2017*
Expiration Date: *8/2018*
Storage Temp: *-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*
Effective Date: *04 Apr 2016*

Assay Name/Specification (minimum release criteria)	Lot #0451708
Blue-White Screening (Terminal Integrity) - A sample of LITMUS38i vector linearized with a 10-fold excess of KasI, religated and transformed into an <i>E. coli</i> 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] <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.	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
Protein Purity Assay (SDS-PAGE) - KasI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass

* 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.



**New England Biolabs
Certificate of Analysis**



Authorized by
Derek Robinson
04 Apr 2016



Inspected by
Kerri Sakowski
16 Aug 2017

