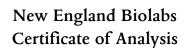


www.neb.com info@neb.com



Product Name: KpnI
Catalog #: R0142M

Concentration: 50,000 units/ml

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of pXba DNA in 1 hour at 37°C in a total reaction volume

of 50 μl .

 Lot #:
 0551504

 Assay Date:
 04/2015

 Expiration Date:
 4/2017

 Storage Temp:
 -20°C

Storage Conditions: 50 mM KCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA

Specification Version: PS-R0142M v1.0 Effective Date: 28 Mar 2014

Assay Name/Specification (minimum release criteria)	Lot #0551504
Blue-White Screening (Terminal Integrity) - A sample of pUC19 vector linearized with a 10-fold excess of KpnI, religated and transformed into an <i>E. coli</i> strain expressing the LacZ beta fragment gene results in <1% white colonies.	Pass
Endonuclease Activity (Nicking) - A 50 μl reaction in NEBuffer 1.1 containing 1 μg of supercoiled PhiX174 DNA and a minimum of 30 Units of KpnI incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
Exonuclease Activity (Radioactivity Release) - A 50 μ l reaction in NEBuffer 1.1 containing 1 μ g of a mixture of single and double-stranded [3 H] <i>E. coli</i> DNA and a minimum of 100 units of KpnI 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 pXba DNA with KpnI, >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 KpnI.	Pass
Non-Specific DNase Activity (16 Hour) - A 50 μl reaction in NEBuffer 1.1 containing 1 μg of pXba DNA and a minimum of 50 Units of KpnI 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) - KpnI is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass







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

* 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 28 Mar 2014







Inspected by David Hough 01 Apr 2015