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New England Biolabs
Certificate of Analysis

Product Name:	*PI-PspI*
Catalog #:	*R0695S/L*
Concentration:	*5,000 units/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to cleave 1 µg of pAKR7 XmnI-linearized Control Plasmid in 1 hour at 65°C in a total reaction volume of 50 µl.*
Lot #:	*0031309*
Assay Date:	*09/2013*
Expiration Date:	*09/2015*
Storage Temp:	*-20 °C*
Storage Conditions:	*300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA*
Specification Version:	*PS-R0695S/L v1.0*
Effective Date:	*02 Oct 2013*

Assay Name/Specification (minimum release criteria)	**Lot #0031309**
Endonuclease Activity (Nicking) - A 50 µl reaction in NEBuffer PI-PspI containing 1 µg of supercoiled PhiX174 DNA and a minimum of 15 Units of PI-PspI incubated for 4 hours at 65°C results in <20% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**
Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in NEBuffer PI-PspI containing 1 µg of a mixture of single and double-stranded [^{3}H] *E. coli* DNA and a minimum of 50 units of PI-PspI incubated for 4 hours at 65°C releases <0.1% of the total radioactivity.	**Pass**
Ligation and Recutting (Terminal Integrity) - After a 5-fold over-digestion of pAKR7-XmnI DNA with PI-PspI, ~75% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~75% can be recut with PI-PspI.	**Pass**
Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in NEBuffer PI-PspI containing 1 µg of pAKR7-XmnI DNA and a minimum of 5 Units of PI-PspI incubated for 16 hours at 65°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**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.*

Authorized by
Derek Robinson
02 Oct 2013

Inspected by
JianYing Luo
02 Oct 2013

nqa ISO 9001 Registered Quality Management
nqa ISO 14001 Registered Environmental Management
nqa ISO 13485 Registered Medical Devices