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## New England Biolabs Certificate of Analysis

Product Name:	HpyAV
Catalog #:	R0621S/L
Concentration:	2,000 units/ml
Unit Definition:	One unit is defined as the amount of enzyme required to digest 1 μg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 μl.
<i>Lot</i> #:	0131602
Assay Date:	02/2016
Expiration Date:	02/2018
Storage Temp:	-20°C
Storage Conditions:	300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 0.5mM NiSO4, 50% Glycerol, 200 μg/ml BSA
Specification Version:	PS-R0621S/L v2.0
Effective Date:	24 Feb 2016

Assay Name/Specification (minimum release criteria)	Lot #0131602
<b>Exonuclease Activity (Radioactivity Release)</b> - A 50 $\mu$ l reaction in CutSmart <sup>TM</sup> Buffer containing 1 $\mu$ g of a mixture of single and double-stranded [ <sup>3</sup> H] <i>E. coli</i> DNA and a minimum of 20 units of HpyAV incubated for 4 hours at 37°C releases <0.3% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> - After a 2-fold over-digestion of Lambda DNA with HpyAV, ~50% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, ~50% can be recut with HpyAV.	
<b>Non-Specific DNase Activity (16 Hour)</b> - A 50 $\mu$ l reaction in CutSmart <sup>TM</sup> Buffer containing 1 $\mu$ g of Lambda DNA and a minimum of 10 Units of HpyAV incubated for 16 hours at 37°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.

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Authorized by Derek Robinson 24 Feb 2016



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Inspected by Penghua Zhang 26 Feb 2016