

## New England Biolabs Certificate of Analysis

**Product Name:** HpyCH4IV  
**Catalog Number:** R0619S  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of pUC19 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10064934  
**Expiration Date:** 01/2022  
**Storage Temperature:** -20°C  
**Storage Conditions:** 100 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml BSA  
**Specification Version:** PS-R0619S/L v1.0


HpyCH4IV Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0619SVIAL	HpyCH4IV	10064933	Pass
B7204SVIAL	CutSmart® Buffer	10068802	Pass

Assay Name/Specification	Lot # 10064934
<p><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] E. coli DNA and a minimum of 30 units of HpyCH4IV incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 10-fold over-digestion of pUC19 DNA with HpyCH4IV, &gt;95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, &gt;95% can be recut with HpyCH4IV.</p>	Pass
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 µl reaction in CutSmart Buffer containing 1 µg of pUC19 DNA and a minimum of 30 units of HpyCH4IV incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	Pass
<p><b>Protein Purity Assay (SDS-PAGE)</b>            HpyCH4IV is &gt;95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.</p>	Pass

This product has been tested and shown to be in compliance with all specifications.



Jianying Luo  
Production Scientist  
29 Jan 2020



Jay Minichiello  
Packaging Quality Control Inspector  
12 Mar 2020