

New England Biolabs Certificate of Analysis

Product Name: *HhaI*
Catalog Number: *R0139L*
Concentration: *20,000 U/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.*
Packaging Lot Number: *10057326*
Expiration Date: *10/2021*
Storage Temperature: *-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-R0139S/L v1.0*

HhaI Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0139LVIAL	HhaI	10057327	Pass
B7204SVIAL	CutSmart® Buffer	10055735	Pass

Assay Name/Specification	Lot # 10057326
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³ H] E. coli DNA and a minimum of 60 units of HhaI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with HhaI, >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 HhaI.	Pass
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of 60 Units of HhaI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass

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



Doreen Duquette
Production Scientist
21 Oct 2019



Jay Minichiello
Packaging Quality Control Inspector
30 Oct 2019