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New England Biolabs Certificate of Analysis

Product Name: Hpal
Catalog Number: R0105S
Concentration: 5,000 U/ml

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg

of Lambda DNA in rCutSmart Buffer in 1 hour at 37°C in a total

reaction volume of 50 μl.

Packaging Lot Number: 10173218
Expiration Date: 12/2024
Storage Temperature: -20°C

Storage Conditions: 10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200

μg/ml rAlbumin (pH 7.4 @25°C)

Specification Version: PS-R0105S/L/V v2.0

Hpal Component List				
NEB Part Number	Component Description	Lot Number	Individual QC Result	
R0105SVIAL	Hpal	10173215	Pass	
B7024AVIAL	Gel Loading Dye, Purple (6X)	10156431	Pass	
B6004SVIAL	rCutSmart™ Buffer	10168648	Pass	

Assay Name/Specification	Lot # 10173218
Protein Purity Assay (SDS-PAGE) Hpal is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
Ligation and Recutting (Terminal Integrity) After a 10-fold over-digestion of Lambda DNA with Hpal, >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 Hpal.	Pass
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 50 units of Hpal incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
Endonuclease Activity (Nicking) A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of supercoiled pUC19 DNA and a minimum of 15 units of Hpal incubated for 4 hours at 37°C results in <10% conversion	Pass



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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

YunJie Sun \
Production Scientist
06 Dec 2022

Michael Tonello

Packaging Quality Control Inspector

07 Dec 2022



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