

## New England Biolabs Certificate of Analysis

**Product Name:** *Dralll-HF®*  
**Catalog Number:** *R3510L*  
**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 rCutSmart Buffer in 1 hour at 37°C in a total reaction volume of 50 µl.*  
**Packaging Lot Number:** *10272701*  
**Expiration Date:** *11/2026*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *20 mM Tris-HCl, 300 mM NaCl, 1 mM Dithiothreitol, 0.1 mM EDTA, 200 µg/ml rAlbumin, 50% Glycerol (pH 7.4 @ 25°C)*  
**Specification Version:** *PS-R3510S/L/V v2.0*

### Dralll-HF® Component List

NEB Part Number	Component Description	Lot Number	Individual QC Result
R3510LVIAL	Dralll-HF®	10261697	Pass
B7024AVIAL	Gel Loading Dye, Purple (6X)	10256010	Pass
B6004SVIAL	rCutSmart™ Buffer	10259597	Pass

Assay Name/Specification	Lot # 10272701
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 200 units of Dralll-HF® incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Functional Testing (15 minute Digest)</b> A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and 1 µl of Dralll-HF® incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> After a 10-fold over-digestion of Lambda DNA with Dralll-HF®, ~75% 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 Dralll-HF®.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of	Pass

Assay Name/Specification	Lot # 10272701
20 units of DralIII-HF® incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	
<b>Protein Purity Assay (SDS-PAGE)</b> DralIII-HF® is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.	Pass
<b>qPCR DNA Contamination (E. coli Genomic)</b> A minimum of 20 units of DralIII-HF® is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is $\leq 1$ E. coli genome.	Pass

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

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