

## New England Biolabs Certificate of Analysis

**Product Name:** DraIII-HF<sup>®</sup>  
**Catalog #:** R3510S/L  
**Concentration:** 20,000 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.  
**Lot #:** 0031805  
**Assay Date:** 05/2018  
**Expiration Date:** 05/2020  
**Storage Temp:** -20°C  
**Storage Conditions:** 20 mM Tris-HCl, 300 mM NaCl, 1 mM Dithiothreitol, 0.1 mM EDTA, 200 µg/ml BSA, 50% Glycerol, pH 7.4 @ 25°C  
**Specification Version:** PS-R3510S/L v1.0  
**Effective Date:** 13 Jan 2016

| Assay Name/Specification (minimum release criteria)                                                                                                                                                                                                                                                                                  | Lot #0031805 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Exonuclease Activity (Radioactivity Release)</b> - A 50 µl reaction in CutSmart <sup>™</sup> Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] <i>E. coli</i> DNA and a minimum of 200 units of DraIII-HF <sup>™</sup> incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | <b>Pass</b>  |
| <b>Ligation and Recutting (Terminal Integrity)</b> - After a 10-fold over-digestion of Lambda DNA with DraIII-HF <sup>™</sup> , ~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 DraIII-HF <sup>™</sup> .                                         | <b>Pass</b>  |
| <b>Non-Specific DNase Activity (16 Hour)</b> - A 50 µl reaction in CutSmart <sup>™</sup> Buffer containing 1 µg of Lambda DNA and a minimum of 20 Units of DraIII-HF <sup>™</sup> incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.      | <b>Pass</b>  |
| <b>Protein Purity Assay (SDS-PAGE)</b> - DraIII-HF <sup>™</sup> is >95% pure as determined by SDS PAGE analysis using Coomassie Blue detection.                                                                                                                                                                                      | <b>Pass</b>  |

\* 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.



Authorized by  
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13 Jan 2016



Inspected by  
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01 May 2018

