# New England Biolabs
## Product Specification

**Product Name:** MboI  
**Catalog #:** R0147S/L  
**Concentration:** 5,000 units/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA (dam-) in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Shelf Life:** 24 months  
**Storage Temp:** -20 ºC  
**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-R0147S/L v1.0  
**Effective Date:** 28 Jun 2013

## Assay Name/Specification (minimum release criteria)

<table>
<thead>
<tr>
<th>Assay Name/Specification</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td><strong>Endonuclease Activity (Nicking)</strong> -</td>
<td>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 50 units of MboI incubated for 4 hours at 37°C results in &lt;20% conversion to the nicked form as determined by agarose gel electrophoresis.</td>
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<tr>
<td><strong>Exonuclease Activity (Radioactivity Release)</strong> -</td>
<td>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 50 units of MboI incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</td>
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<td><strong>Ligation and Recutting (Terminal Integrity)</strong> -</td>
<td>After a 10-fold over-digestion of Lambda dam- DNA with MboI, &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 MboI.</td>
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<tr>
<td><strong>Non-Specific DNase Activity (16 Hour)</strong> -</td>
<td>A 50 µl reaction in CutSmart™ Buffer containing 1 µg of Lambda dam- DNA and a minimum of 50 Units of MboI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</td>
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* 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.

Date 28 Jun 2013  
Derek Robinson  
Director of Quality Control