Product Name: XcmI  
Catalog #: R0533S/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 in 1 hour at 37°C in a total reaction volume of 50 µl.  
Shelf Life: 24 months  
Storage Temp: -20 °C  
Storage Conditions: 250 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton X-100, 200 µg/ml BSA  
Specification Version: PS-R0533S/L v1.0  
Effective Date: 03 May 2013

<table>
<thead>
<tr>
<th>Assay Name/Specification (minimum release criteria)</th>
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<tbody>
<tr>
<td><strong>Exonuclease Activity (Radioactivity Release)</strong> - A 50 µl reaction in NEBuffer 2.1 containing 1 µg of a mixture of single and double-stranded [³²P] E. coli DNA and a minimum of 50 units of XcmI 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> - After a 10-fold over-digestion of Lambda DNA with XcmI, ~25% 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 XcmI.</td>
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<td><strong>Non-Specific DNase Activity (16 hour)</strong> - A 50 µl reaction in NEBuffer 2.1 containing 1 µg of Lambda DNA and a minimum of 5 Units of XcmI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. NOTE: although no nuclease degradation is detected under these conditions, extended incubations and/or high concentrations of this enzyme may result in star activity. See the product FAQ for recommended reaction conditions for this enzyme.</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.

Derek Robinson  
Director of Quality Control  

Date 03 May 2013