

## New England Biolabs Certificate of Analysis

**Product Name:** Bmtl  
**Catalog Number:** R0658S  
**Concentration:** 10,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of pXba in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10070690  
**Expiration Date:** 03/2022  
**Storage Temperature:** -20°C  
**Storage Conditions:** 300 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 500 µg/ml BSA  
**Specification Version:** PS-R0658S/L v1.0

Bmtl Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
R0658SVIAL	Bmtl	10070689	Pass
B7203SVIAL	NEBuffer™ 3.1	10072160	Pass

Assay Name/Specification	Lot # 10070690
<p><b>Exonuclease Activity (Radioactivity Release)</b>            A 50 µl reaction in NEBuffer 3.1 containing 1 µg of a mixture of single and double-stranded [<sup>3</sup>H] E. coli DNA and a minimum of 50 units of Bmtl incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Ligation and Recutting (Terminal Integrity)</b>            After a 10-fold over-digestion of pXba DNA with Bmtl, &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 Bmtl.</p>	Pass
<p><b>Non-Specific DNase Activity (16 hour)</b>            A 50 µl reaction in NEBuffer 3.1 containing 1 µg of pXba DNA and a minimum of 10 units of Bmtl 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.</p>	Pass
<p><b>Protein Purity Assay (SDS-PAGE)</b></p>	Pass

Assay Name/Specification	Lot # 10070690
Bmtl is $\geq$ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	

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

  
Penghua Zhang  
Production Scientist  
16 Jun 2020

  
Michael Tonello  
Packaging Quality Control Inspector  
16 Jun 2020