

## New England Biolabs Certificate of Analysis

Product Name: SHuffle<sup>®</sup> T7 Competent *E.coli*  
 Catalog Number: C3026J  
 Packaging Lot Number: 10113643  
 Expiration Date: 06/2022  
 Storage Temperature: -80°C  
 Specification Version: PS-C3026J v1.0

SHuffle <sup>®</sup> T7 Competent <i>E.coli</i> Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
C3026JVIAL	SHuffle <sup>®</sup> T7 Competent <i>E.coli</i>	10094259	Pass

Assay Name/Specification	Lot # 10113643
<p><b>Phage Resistance (<math>\phi</math> 80)</b>            15 <math>\mu</math>l of untransformed SHuffle<sup>®</sup> T7 Competent <i>E. coli</i> streaked onto a Rich Broth plate does not support plaque formation by phage <math>\phi</math> 80 after incubation for 16 hours at 37°C.</p>	Pass
<p><b>Transformation Efficiency</b>            50 <math>\mu</math>l of SHuffle<sup>®</sup> T7 Competent <i>E. coli</i> cells were transformed with 100 pg of pUC19 DNA using the transformation protocol provided. Incubation overnight on LB-Ampicillin plates at 37°C resulted in <math>&gt;1 \times 10^6</math> cfu/<math>\mu</math>g of DNA.</p>	Pass
<p><b>Functional Testing (Disulfide Bond Formation)</b>            The nuclease NucA requires disulfide bonds for its stability. When expressed at 37°C in <i>E. coli</i>, NucA is toxic to cells only in its oxidized disulfide-bonded state. Transformation of SHuffle<sup>®</sup> T7 Competent <i>E. coli</i> using 100 pg of plasmid that expresses a MBP-NucA fusion results in <math>&lt; 1\%</math> of the colonies when compared to a control transformation of its wild type parent strain NEB 10-beta.</p>	Pass
<p><b>Antibiotic Resistance (Nitrofurantoin)</b>            15 <math>\mu</math>l of untransformed SHuffle<sup>®</sup> T7 Competent <i>E. coli</i> streaked onto a LB or Rich Broth plate containing Nitrofurantoin will form colonies after incubation for 16 hours at 37°C.</p>	Pass
<p><b>Antibiotic Resistance (Spectinomycin)</b>            15 <math>\mu</math>l of untransformed SHuffle<sup>®</sup> T7 Competent <i>E. coli</i> streaked onto a LB or Rich Broth plate containing Spectinomycin will form colonies after incubation for 16 hours at 37°C.</p>	Pass

Assay Name/Specification	Lot # 10113643
<p><b>Antibiotic Resistance (Streptomycin)</b> 15 µl of untransformed SHuffle® T7 Competent E. coli streaked onto a LB or Rich Broth plate containing Streptomycin will form colonies after incubation for 16 hours at 37°C.</p>	<b>Pass</b>
<p><b>Antibiotic Sensitivity (Ampicillin)</b> 15 µl of untransformed SHuffle® T7 Competent E. coli streaked onto a LB or Rich Broth plate containing Ampicillin will not form colonies after incubation for 16 hours at 37°C.</p>	<b>Pass</b>
<p><b>Antibiotic Sensitivity (Chloramphenicol)</b> 15 µl of untransformed SHuffle® T7 Competent E. coli streaked onto a LB or Rich Broth plate containing Chloramphenicol will not form colonies after incubation for 16 hours at 37°C.</p>	<b>Pass</b>
<p><b>Antibiotic Sensitivity (Kanamycin)</b> 15 µl of untransformed SHuffle® T7 Competent E. coli streaked onto a LB or Rich Broth plate containing Kanamycin will not form colonies after incubation for 16 hours at 37°C.</p>	<b>Pass</b>
<p><b>Antibiotic Sensitivity (Tetracycline)</b> 15 µl of untransformed SHuffle® T7 Competent E. coli streaked onto a LB or Rich Broth plate containing Tetracycline will not form colonies after incubation for 16 hours at 37°C.</p>	<b>Pass</b>

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

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Production Scientist  
25 Jun 2021



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Packaging Quality Control Inspector  
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