

## New England Biolabs Certificate of Analysis

**Product Name:** SHuffle<sup>®</sup> T7 Competent *E.coli*  
**Catalog Number:** C3026J  
**Packaging Lot Number:** 10142465  
**Expiration Date:** 02/2023  
**Storage Temperature:** -80°C  
**Specification Version:** PS-C3026J v1.0

### SHuffle<sup>®</sup> T7 Competent *E.coli* Component List

NEB Part Number	Component Description	Lot Number	Individual QC Result
C3026JVIAL	SHuffle <sup>®</sup> T7 Competent <i>E.coli</i>	10119390	Pass

Assay Name/Specification	Lot # 10142465
<b>Phage Resistance (<math>\phi</math> 80)</b> 15 $\mu$ 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 $\phi$ 80 after incubation for 16 hours at 37°C.	Pass
<b>Transformation Efficiency</b> 50 $\mu$ 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 $>1 \times 10^6$ cfu/ $\mu$ g of DNA.	Pass
<b>Antibiotic Sensitivity (Ampicillin)</b> 15 $\mu$ l of untransformed SHuffle <sup>®</sup> T7 Competent <i>E. coli</i> streaked onto a LB or Rich Broth plate containing Ampicillin will not form colonies after incubation for 16 hours at 37°C.	Pass
<b>Antibiotic Sensitivity (Chloramphenicol)</b> 15 $\mu$ l of untransformed SHuffle <sup>®</sup> T7 Competent <i>E. coli</i> streaked onto a LB or Rich Broth plate containing Chloramphenicol will not form colonies after incubation for 16 hours at 37°C.	Pass
<b>Antibiotic Resistance (Nitrofurantoin)</b> 15 $\mu$ 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.	Pass
<b>Antibiotic Resistance (Spectinomycin)</b>	Pass

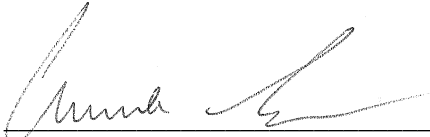
Assay Name/Specification	Lot # 10142465
<p>15 µl of untransformed SHuffle® T7 Competent E. coli streaked onto a LB or Rich Broth plate containing Spectinomycin will form colonies after incubation for 16 hours at 37°C.</p>	
<p><b>Antibiotic Resistance (Streptomycin)</b> 15 µl of untransformed SHuffle® 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 (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>
<p><b>Functional Testing (Disulfide Bond Formation)</b> The nuclease NucA requires disulfide bonds for its stability. When expressed at 37°C in E. coli, NucA is toxic to cells only in its oxidized disulfide-bonded state. Transformation of SHuffle® T7 Competent E. coli using 100 pg of plasmid that expresses a MBP-NucA fusion results in &lt; 1% of the colonies when compared to a control transformation of its wild type parent strain NEB 10-beta.</p>	<b>Pass</b>

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

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