

New England Biolabs Certificate of Analysis

Product Name: SHuffle[®] T7 Competent *E.coli*
Catalog Number: C3026J
Packaging Lot Number: 10218526
Expiration Date: 11/2024
Storage Temperature: -80°C
Specification Version: PS-C3026J v2.0

SHuffle [®] T7 Competent E.coli Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
C3026JVIAL	SHuffle [®] T7 Competent E.coli	10191193	Pass

Assay Name/Specification	Lot # 10218526
Antibiotic Resistance (Nitrofurantoin) 15 µl of untransformed SHuffle [®] 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
Antibiotic Resistance (Spectinomycin) 15 µl of untransformed SHuffle [®] 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.	Pass
Antibiotic Resistance (Streptomycin) 15 µl of untransformed SHuffle [®] T7 Competent <i>E. coli</i> streaked onto a LB or Rich Broth plate containing Streptomycin will form colonies after incubation for 16 hours at 37°C.	Pass
Antibiotic Sensitivity (Ampicillin) 15 µl of untransformed SHuffle [®] 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
Antibiotic Sensitivity (Chloramphenicol) 15 µl of untransformed SHuffle [®] 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
Antibiotic Sensitivity (Kanamycin)	Pass

Assay Name/Specification	Lot # 10218526
<p>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>	
<p>Antibiotic Sensitivity (Tetracycline) 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>	Pass
<p>Functional Testing (Disulfide Bond Formation) The nuclease NucA requires disulfide bonds for its stability. When expressed at 30°C in E. coli, NucA is toxic to cells only in its oxidized disulfide-bonded state. Transformation of SHuffle® T7 Express Competent E. coli using 100 pg of plasmid that expresses a MBP-NucA fusion results in < 1% of the colonies when compared to a control transformation of its wild type parent strain NEB 10-beta after 0.4 mM IPTG induction at 30°C.</p>	Pass
<p>Phage Resistance (φ 80) 15 µl of untransformed SHuffle® T7 Competent E. coli streaked onto a Rich Broth plate does not support plaque formation by phage φ 80 after incubation for 16 hours at 37°C.</p>	Pass
<p>Transformation Efficiency 50 µl of SHuffle® T7 Competent E. coli 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 x 10⁶ cfu/µg of DNA.</p>	Pass

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.



Doreen Duquette
Production Scientist
22 May 2023



Nick Privitera
Packaging Quality Control Inspector
16 Nov 2023