

New England Biolabs Certificate of Analysis

Product Name: SHuffle® T7 Competent E.coli
Catalog Number: C3026J
Packaging Lot Number: 10212263
Expiration Date: 10/2024
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 | 10179958 | Pass |

| Assay Name/Specification | Lot # 10212263 |
|---|----------------|
| Antibiotic Resistance (Nitrofurantoin) 15 µl of untransformed SHuffle® T7 Competent E. coli 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 E. coli 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 E. coli 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 E. coli 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 E. coli 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 # 10212263 |
|---|----------------|
| <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.

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Production Scientist
03 Mar 2023



Nick Privitera
Packaging Quality Control Inspector
05 Oct 2023