

New England Biolabs Certificate of Analysis

Product Name: SHuffle[®] T7 Competent *E. coli*
Catalog #: C3026J
Lot #: 0071705
Assay Date: 05/2017
Expiration Date: 05/2018
Storage Temp: -80°C
Specification Version: PS-C3026J v1.0
Effective Date: 12 Apr 2017

Assay Name/Specification (minimum release criteria)	Lot #0071705
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) - 15 µl of untransformed SHuffle [®] T7 Competent <i>E. coli</i> streaked onto a LB or Rich Broth plate containing Kanamycin will not form colonies after incubation for 16 hours at 37°C.	Pass
Antibiotic Sensitivity (Tetracycline) - 15 µl of untransformed SHuffle [®] T7 Competent <i>E. coli</i> streaked onto a LB or Rich Broth plate containing Tetracycline will not form colonies after incubation for 16 hours at 37°C.	Pass
Functional Testing (Disulfide Bond Formation) - 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 [®] T7 Competent <i>E. coli</i> 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.	Pass



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Phage Resistance (Φ 80) - 15 µl of untransformed SHuffle [®] T7 Competent <i>E. coli</i> streaked onto a Rich Broth plate does not support plaque formation by phage Φ 80 after incubation for 16 hours at 37°C.	Pass
Transformation Efficiency - 50 µl of SHuffle [®] 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 x 10e6 cfu/µg of DNA.	Pass



Authorized by
Derek Robinson
12 Apr 2017



Inspected by
Quiting Ren
06 Jun 2017

