

New England Biolabs Certificate of Analysis

Product Name: SHuffle[®] Express Competent *E. coli*
 Catalog #: C3028J
 Lot #: 0081708
 Assay Date: 08/2017
 Expiration Date: 08/2018
 Storage Temp: -80°C
 Specification Version: PS-C3028J v1.0
 Effective Date: 31 Aug 2017

| Assay Name/Specification (minimum release criteria) | Lot #0081708 |
|--|--------------|
| Antibiotic Resistance (Nitrofurantoin) - 15 µl of untransformed SHuffle [®] Express 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 [®] Express 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 [®] Express 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 [®] Express 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 [®] Express 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 [®] Express 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 [®] Express 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 [®] Express 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 [®] Express 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 [®] Express 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 10 ⁷ cfu/µg of DNA. | Pass |



 Authorized by
 Quiting Ren
 31 Aug 2017



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