NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name: *SHuffle® T7 Express lysY Competent E.coli*
Catalog Number: *C3030J*
Packaging Lot Number: *10104525*
Expiration Date: *03/2022*
Storage Temperature: *-80°C*
Specification Version: *PS-C3030J v1.0*

SHuffle® T7 Express lysY Competent E.coli Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
C3030JVIAL	SHuffle® T7 Express lysY Competent E.coli	10058141	**Pass**

Assay Name/Specification	Lot # 10104525
Antibiotic Resistance (Streptomycin) 15 µl of untransformed Shuffle® T7 Express lysY 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 Express lysY 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 (Kanamycin) 15 µl of untransformed Shuffle® T7 Express lysY 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.	**Pass**
Antibiotic Sensitivity (Tetracycline) 15 µl of untransformed Shuffle® T7 Express lysY 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.	**Pass**
Functional Testing (Disulfide Bond Formation) 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 Express lysY 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.	**Pass**

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Assay Name/Specification	Lot # 10104525
Phage Resistance (ϕ 80) 15 µl of untransformed Shuffle® T7 Express lysY 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.	**Pass**
Transformation Efficiency 50 µl of SHuffle® T7 Express lysY 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 10e7 cfu/µg of DNA.	**Pass**
Antibiotic Resistance (Spectinomycin) 15 µl of untransformed Shuffle® T7 Express lysY 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 (Chloramphenicol) 15 µl of untransformed Shuffle® T7 Express lysY Competent E. coli streaked onto a LB or Rich Broth plate containing Chloramphenicol will form colonies after incubation for 16 hours at 37°C.	**Pass**
Antibiotic Resistance (Nitrofurantoin) 15 µl of untransformed Shuffle® T7 Express lysY 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**

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

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Qiuting Ren
Production Scientist
26 Mar 2021

Corey Rabeau
Packaging Quality Control Inspector
26 Mar 2021