

## New England Biolabs Certificate of Analysis

**Product Name:** NEB® 10-beta Competent *E. coli* (High Efficiency)  
**Catalog Number:** C3019I  
**Lot Number:** 10043937  
**Expiration Date:** 04/2020  
**Storage Temperature:** -80°C  
**Specification Version:** PS-C3019H/I v1.0

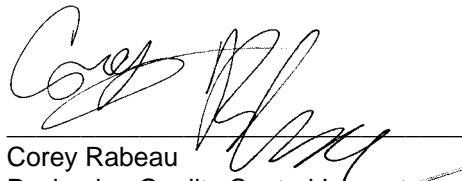
| NEB® 10-beta Competent <i>E. coli</i> (High Efficiency) Component List |   |            |                      |
|--|---|------------|----------------------|
| NEB Part Number  | Component Description                                   | Lot Number | Individual QC Result |
| N3041AVIAL   | pUC19 Vector  | 10035844   | Pass                 |
| C3019IVIAL   | NEB® 10-beta Competent <i>E. coli</i> (High Efficiency) | 10035554   | Pass                 |
| B9035SVIAL   | NEB® 10-beta/Stable Outgrowth Medium                    | 10032884   | Pass                 |

| Assay Name/Specification  | Lot # 10043937 |
|---|----------------|
| <b>Antibiotic Sensitivity (Chloramphenicol)</b><br>15 µl of untransformed NEB® 10-beta Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Chloramphenicol will not form colonies after incubation for 16 hours at 37°C. | <b>Pass</b>    |
| <b>Antibiotic Sensitivity (Kanamycin)</b><br>15 µl of untransformed NEB® 10-beta Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Kanamycin will not form colonies after incubation for 16 hours at 37°C.             | <b>Pass</b>    |
| <b>Antibiotic Sensitivity (Nitrofurantoin)</b><br>15 µl of untransformed NEB® 10-beta Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Nitrofurantoin will not form colonies after incubation for 16 hours at 37°C.   | <b>Pass</b>    |
| <b>Antibiotic Sensitivity (Spectinomycin)</b><br>15 µl of untransformed NEB® 10-beta Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Spectinomycin will not form colonies after incubation for 16 hours at 37°C.     | <b>Pass</b>    |
| <b>Antibiotic Sensitivity (Tetracycline)</b><br>15 µl of untransformed NEB® 10-beta Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Tetracycline will not form colonies after  | <b>Pass</b>    |

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|---|----------------|
| incubation for 16 hours at 37°C.  |                |
| <p><b>Blue-White Screening (<math>\alpha</math>-complementation, Competent Cells)</b><br/>NEB<sup>®</sup> 10-beta Competent E. coli (High Efficiency) were shown to be suitable for blue/white screening by <math>\alpha</math>-complementation of the <math>\beta</math>-galactosidase gene using pUC19.</p>   | <b>Pass</b>    |
| <p><b>Phage Resistance (<math>\phi</math> 80)</b><br/>15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 10-beta Competent E. coli (High Efficiency) streaked onto a Rich Broth plate does not support plaque formation by phage <math>\phi</math> 80 after incubation for 16 hours at 37°C.</p>   | <b>Pass</b>    |
| <p><b>Transformation Efficiency</b><br/>50 <math>\mu</math>l of NEB<sup>®</sup> 10-beta Competent E. coli (High Efficiency) 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 <math>&gt;1 \times 10^9</math> cfu/<math>\mu</math>g of DNA.</p> | <b>Pass</b>    |
| <p><b>Antibiotic Resistance (Streptomycin)</b><br/>15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 10-beta Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Streptomycin will form colonies after incubation for 16 hours at 37°C.</p>   | <b>Pass</b>    |
| <p><b>Antibiotic Sensitivity (Ampicillin)</b><br/>15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 10-beta Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Ampicillin will not form colonies after incubation for 16 hours at 37°C.</p>  | <b>Pass</b>    |

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

Chris Blanchette  
Production Scientist  
04 Mar 2019



Corey Rabeau  
Packaging Quality Control Inspector  
25 Apr 2019