

## New England Biolabs Certificate of Analysis

**Product Name:** NEB® 5-alpha Electrocompetent *E.coli*  
**Catalog Number:** C2989K  
**Lot Number:** 10054063  
**Expiration Date:** 08/2020  
**Storage Temperature:** -80°C  
**Specification Version:** PS-C2989K v1.0

| NEB® 5-alpha Electrocompetent E.coli Component List |                                             |            |                      |
|-----------------------------------------------------|---------------------------------------------|------------|----------------------|
| NEB Part Number                                     | Component Description                       | Lot Number | Individual QC Result |
| N3041AVIAL                                          | pUC19 Vector                                | 10047676   | Pass                 |
| C2989KVIAL                                          | NEB® 5-alpha Electrocompetent <i>E.coli</i> | 10038962   | Pass                 |
| B9020SVIAL                                          | SOC Outgrowth Medium                        | 10045024   | Pass                 |

| Assay Name/Specification                                                                                                                                                                                                                               | Lot # 10054063 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Antibiotic Sensitivity (Ampicillin)</b><br>15 µl of untransformed NEB® 5-alpha Electrocompetent <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           |
| <b>Antibiotic Sensitivity (Chloramphenicol)</b><br>15 µl of untransformed NEB® 5-alpha Electrocompetent <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           |
| <b>Antibiotic Sensitivity (Kanamycin)</b><br>15 µl of untransformed NEB® 5-alpha Electrocompetent <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           |
| <b>Antibiotic Sensitivity (Nitrofurantoin)</b><br>15 µl of untransformed NEB® 5-alpha Electrocompetent <i>E. coli</i> streaked onto a LB or Rich Broth plate containing Nitrofurantoin will not form colonies after incubation for 16 hours at 37°C.   | Pass           |
| <b>Antibiotic Sensitivity (Spectinomycin)</b><br>15 µl of untransformed NEB® 5-alpha Electrocompetent <i>E. coli</i> streaked onto a LB or Rich Broth plate containing Spectinomycin will not form colonies after incubation                           | Pass           |

| Assay Name/Specification                                                                                                                                                                                                                                                                      | Lot # 10054063 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| for 16 hours at 37°C.                                                                                                                                                                                                                                                                         |                |
| <p><b>Transformation Efficiency</b><br/>25 µl of NEB® 5-alpha Electrocompetent E. coli cells were transformed with 10 pg of pUC19 DNA using the transformation protocol provided. Incubation overnight on LB-Ampicillin plates at 37°C resulted in &gt;1 x 10<sup>10</sup> cfu/µg of DNA.</p> | <b>Pass</b>    |
| <p><b>Phage Resistance (φ 80)</b><br/>15 µl of untransformed NEB® 5-alpha Electrocompetent 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>                                                                | <b>Pass</b>    |
| <p><b>Blue-White Screening (α-complementation, Competent Cells)</b><br/>NEB® 5-alpha Electrocompetent E. coli were shown to be suitable for blue/white screening by α-complementation of the β-galactosidase gene using pUC19.</p>                                                            | <b>Pass</b>    |
| <p><b>Antibiotic Sensitivity (Tetracycline)</b><br/>15 µl of untransformed NEB® 5-alpha Electrocompetent 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>                                             | <b>Pass</b>    |
| <p><b>Antibiotic Sensitivity (Streptomycin)</b><br/>15 µl of untransformed NEB® 5-alpha Electrocompetent E. coli streaked onto a LB or Rich Broth plate containing Streptomycin 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.



Derek Robinson  
Production Scientist  
05 Apr 2019



Nick Privitera  
Packaging Quality Control Inspector  
03 Sep 2019