

## New England Biolabs Certificate of Analysis

Product Name: NEB® 5-alpha Competent *E. coli* (High Efficiency)  
 Catalog Number: C2987H  
 Packaging Lot Number: 10130653  
 Expiration Date: 11/2022  
 Storage Temperature: -80°C  
 Specification Version: PS-C2987H/I v1.0

| NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency) Component List |   |            |                      |
|--|---|------------|----------------------|
| NEB Part Number  | Component Description                                   | Lot Number | Individual QC Result |
| N3041AVIAL   | pUC19 Vector  | 10119396   | Pass                 |
| C2987HVIAL   | NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency) | 10119044   | Pass                 |
| B9020SVIAL   | SOC Outgrowth Medium                                    | 10107474   | Pass                 |

| Assay Name/Specification   | Lot # 10130653 |
|--|----------------|
| <p><b>Antibiotic Sensitivity (Tetracycline)</b><br/>           15 µl of untransformed NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Tetracycline will not form colonies after incubation for 16 hours at 37°C.</p>     | Pass           |
| <p><b>Antibiotic Sensitivity (Spectinomycin)</b><br/>           15 µl of untransformed NEB® 5-alpha 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.</p>   | Pass           |
| <p><b>Antibiotic Sensitivity (Nitrofurantoin)</b><br/>           15 µl of untransformed NEB® 5-alpha 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.</p> | Pass           |
| <p><b>Antibiotic Sensitivity (Streptomycin)</b><br/>           15 µl of untransformed NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Streptomycin will not form colonies after incubation for 16 hours at 37°C.</p>     | Pass           |
| <p><b>Transformation Efficiency</b><br/>           50 µl of NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency) cells were transformed with 100 pg of pUC19 DNA using the transformation protocol provided. Incubation</p>   | Pass           |

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|--|----------------|
| overnight on LB-Ampicillin plates at 37°C resulted in >1 x 10e9 cfu/μg of DNA.   |                |
| <p><b>Blue-White Screening (α-complementation, Competent Cells)</b><br/>NEB® 5-alpha Competent E. coli (High Efficiency) 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>Phage Resistance (φ 80)</b><br/>15 μl of untransformed NEB® 5-alpha Competent E. coli (High Efficiency) 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>Antibiotic Sensitivity (Chloramphenicol)</b><br/>15 μl of untransformed NEB® 5-alpha Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Chloramphenicol will not form colonies after incubation for 16 hours at 37°C.</p> | <b>Pass</b>    |
| <p><b>Antibiotic Sensitivity (Chloramphenicol)</b><br/>15 μl of untransformed NEB® 5-alpha Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Chloramphenicol will not form colonies after incubation for 16 hours at 37°C.</p> | <b>Pass</b>    |
| <p><b>Antibiotic Sensitivity (Kanamycin)</b><br/>15 μl of untransformed NEB® 5-alpha Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Kanamycin will not form colonies after incubation for 16 hours at 37°C.</p>             | <b>Pass</b>    |
| <p><b>Antibiotic Sensitivity (Ampicillin)</b><br/>15 μl of untransformed NEB® 5-alpha 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.

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