

## New England Biolabs Certificate of Analysis

**Product Name:** NEB® 5-alpha Competent *E. coli* (High Efficiency)  
**Catalog Number:** C2987U  
**Packaging Lot Number:** 10254822  
**Expiration Date:** 08/2025  
**Storage Temperature:** -80°C  
**Specification Version:** PS-C2987U v2.0

| 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  | 10244721   | Pass                 |
| C2987UVIAL   | NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency) | 10229285   | Pass                 |
| B9020SVIAL   | SOC Outgrowth Medium                                    | 10222592   | Pass                 |

| Assay Name/Specification  | Lot # 10254822 |
|---|----------------|
| <b>Antibiotic Sensitivity (Ampicillin)</b><br>15 µl of untransformed NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Ampicillin will not form colonies after incubation for 16 hours at 37°C.           | <b>Pass</b>    |
| <b>Antibiotic Sensitivity (Chloramphenicol)</b><br>15 µl of untransformed NEB® 5-alpha 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® 5-alpha 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® 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.   | <b>Pass</b>    |
| <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                                      | <b>Pass</b>    |

| Assay Name/Specification  | Lot # 10254822 |
|---|----------------|
| incubation for 16 hours at 37°C.  |                |
| <p><b>Antibiotic Sensitivity (Streptomycin)</b><br/>15 µl of untransformed NEB® 5-alpha Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Streptomycin will not form colonies after incubation for 16 hours at 37°C.</p>  | <b>Pass</b>    |
| <p><b>Antibiotic Sensitivity (Tetracycline)</b><br/>15 µl of untransformed NEB® 5-alpha Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Tetracycline will not form colonies 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 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>Transformation Efficiency</b><br/>1 well of NEB® 5-alpha 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 &gt;1 x 10e9 cfu/µg of DNA.</p> | <b>Pass</b>    |

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

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