## New England Biolabs
### Certificate of Analysis

**Product Name:** NEB® 5-alpha Competent E. coli (High Efficiency)

**Catalog #:** C2987P

**Lot #:** 5111708

**Assay Date:** 08/2017

**Expiration Date:** 08/2018

**Storage Temp:** -80°C

**Specification Version:** PS-C2987P v2.0

**Effective Date:** 02 May 2017

<table>
<thead>
<tr>
<th>Assay Name/Specification (minimum release criteria)</th>
<th>Lot #5111708</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antibiotic Sensitivity (Ampicillin)</strong> - 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.</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Antibiotic Sensitivity (Chloramphenicol)</strong> - 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.</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Antibiotic Sensitivity (Kanamycin)</strong> - 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.</td>
<td>Pass</td>
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<tr>
<td><strong>Antibiotic Sensitivity (Nitrofurantoin)</strong> - 15 µl of untransformed NEB® 5-alpha Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Nitrofurantoin will not form colonies after incubation for 16 hours at 37°C.</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Antibiotic Sensitivity (Spectinomycin)</strong> - 15 µl of untransformed NEB® 5-alpha Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Spectinomycin will not form colonies after incubation for 16 hours at 37°C.</td>
<td>Pass</td>
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<tr>
<td><strong>Antibiotic Sensitivity (Streptomycin)</strong> - 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.</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Antibiotic Sensitivity (Tetracycline)</strong> - 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.</td>
<td>Pass</td>
</tr>
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<td>Assay Name/Specification</td>
<td>Lot #5111708</td>
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<tr>
<td>Blue-White Screening (α-complementation, Competent Cells) - NEB® 5-alpha Competent <em>E. coli</em> (High Efficiency) were shown to be suitable for blue/white screening by α-complementation of the β-galactosidase gene using pUC19.</td>
<td>Pass</td>
</tr>
<tr>
<td>Phage Resistance (Φ 80) - 15 µl of untransformed NEB® 5-alpha Competent <em>E. coli</em> (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.</td>
<td>Pass</td>
</tr>
<tr>
<td>Transformation Efficiency - 1 well of NEB® 5-alpha Competent <em>E. coli</em> (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.</td>
<td>Pass</td>
</tr>
</tbody>
</table>