

## New England Biolabs Certificate of Analysis

**Product Name:** NEB® 5-alpha Competent *E. coli* (High Efficiency)  
**Catalog Number:** C2987U  
**Packaging Lot Number:** 10170207  
**Expiration Date:** 10/2023  
**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	10165704	Pass
C2987UVIAL	NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency)	10135477	Pass
B9020SVIAL	SOC Outgrowth Medium	10160312	Pass

Assay Name/Specification	Lot # 10170207
<b>Antibiotic Sensitivity (Streptomycin)</b> 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.	<b>Pass</b>
<b>Transformation Efficiency</b> 1 well 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 overnight on LB-Ampicillin plates at 37°C resulted in >1 x 10 <sup>9</sup> cfu/µg of DNA.	<b>Pass</b>
<b>Blue-White Screening (α-complementation, Competent Cells)</b> NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency) were shown to be suitable for blue/white screening by α-complementation of the β-galactosidase gene using pUC19.	<b>Pass</b>
<b>Phage Resistance (φ 80)</b> 15 µl of untransformed NEB® 5-alpha Competent <i>E. coli</i> (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.	<b>Pass</b>
<b>Antibiotic Sensitivity (Spectinomycin)</b> 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.	<b>Pass</b>

Assay Name/Specification	Lot # 10170207
<p><b>Antibiotic Sensitivity (Kanamycin)</b> 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 (Nitrofurantoin)</b> 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.</p>	<b>Pass</b>
<p><b>Antibiotic Sensitivity (Tetracycline)</b> 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>Antibiotic Sensitivity (Chloramphenicol)</b> 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 (Ampicillin)</b> 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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