

## New England Biolabs Certificate of Analysis

**Product Name:** NEB® 5-alpha Competent *E. coli* (High Efficiency)  
**Catalog Number:** C2987P  
**Lot Number:** 10018930  
**Expiration Date:** 08/2019  
**Storage Temperature:** -80°C  
**Specification Version:** PS-C2987P 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	10010689	Pass
C2987PVIAL	NEB® 5-alpha Competent <i>E. coli</i> (High Efficiency)	10013616	Pass
B9020SVIAL	SOC Outgrowth Medium	10011187	Pass

Assay Name/Specification	Lot # 10018930
<b>Antibiotic Sensitivity (Nitrofurantoin)</b> 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> 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>
<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>Antibiotic Sensitivity (Tetracycline)</b> 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.	<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>

Assay Name/Specification	Lot # 10018930
<p><b>Phage Resistance (<math>\phi</math> 80)</b> 15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 5-alpha Competent E. coli (High Efficiency) streaked onto a Rich Broth plate does not support plaque formation by phage <math>\phi</math> 80 after incubation for 16 hours at 37°C.</p>	<b>Pass</b>
<p><b>Transformation Efficiency</b> 1 well of NEB<sup>®</sup> 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 <math>&gt;1 \times 10^9</math> cfu/<math>\mu</math>g of DNA.</p>	<b>Pass</b>
<p><b>Antibiotic Sensitivity (Kanamycin)</b> 15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 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> 15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 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>
<p><b>Antibiotic Sensitivity (Chloramphenicol)</b> 15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 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>

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



Lixin An  
Production Scientist  
22 Jun 2018



Nick Privitera  
Packaging Quality Control Inspector  
13 Aug 2018