

## New England Biolabs Certificate of Analysis

**Product Name:** NEB® 5-alpha Competent *E. coli* (Subcloning Efficiency)  
**Catalog #:** C2988J  
**Lot #:** 0481802  
**Assay Date:** 02/2018  
**Expiration Date:** 02/2019  
**Storage Temp:** -80°C  
**Specification Version:** PS-C2988J v1.0  
**Effective Date:** 16 Oct 2017

Assay Name/Specification (minimum release criteria)	Lot #0481802
<b>Antibiotic Sensitivity (Ampicillin)</b> - 15 µl of untransformed NEB® 5-alpha Competent <i>E. coli</i> (Subcloning 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> - 15 µl of untransformed NEB® 5-alpha Competent <i>E. coli</i> (Subcloning 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> - 15 µl of untransformed NEB® 5-alpha Competent <i>E. coli</i> (Subcloning 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> - 15 µl of untransformed NEB® 5-alpha Competent <i>E. coli</i> (Subcloning 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> (Subcloning 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> (Subcloning 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> (Subcloning Efficiency) streaked onto a Rich Broth plate containing Tetracycline will not form colonies after incubation for 16 hours at 37°C.	<b>Pass</b>



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<p><b>Blue-White Screening (<math>\alpha</math>-complementation, Competent Cells)</b> - NEB<sup>®</sup> 5-alpha Competent <i>E. coli</i> (Subcloning Efficiency) were shown to be suitable for blue/white screening by <math>\alpha</math>-complementation of the <math>\beta</math>-galactosidase gene using pUC19.</p>	<b>Pass</b>
<p><b>Phage Resistance (<math>\Phi</math> 80)</b> - 15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 5-alpha Competent <i>E. coli</i> (Subcloning 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> - 50 <math>\mu</math>l of NEB<sup>®</sup> 5-alpha Competent <i>E. coli</i> (Subcloning 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 10^6</math> cfu/<math>\mu</math>g of DNA.</p>	<b>Pass</b>



Authorized by  
Derek Robinson  
16 Oct 2017



Inspected by  
Lixin An  
15 Feb 2018

