

## New England Biolabs Certificate of Analysis

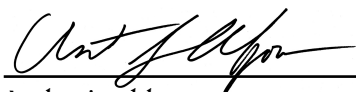
**Product Name:** NEB® 5-alpha Competent *E. coli* (High Efficiency)  
**Catalog #:** C2987H/I  
**Lot #:** 5741802  
**Assay Date:** 02/2018  
**Expiration Date:** 02/2019  
**Storage Temp:** -80°C  
**Specification Version:** PS-C2987H/I v1.0  
**Effective Date:** 29 Dec 2017

Assay Name/Specification (minimum release criteria)	Lot #5741802
<b>Antibiotic Sensitivity (Ampicillin)</b> - 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> - 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> - 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> - 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>

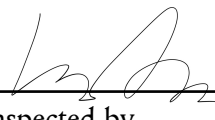


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<b>Blue-White Screening (<math>\alpha</math>-complementation, Competent Cells)</b> - NEB <sup>®</sup> 5-alpha Competent <i>E. coli</i> (High Efficiency) were shown to be suitable for blue/white screening by $\alpha$ -complementation of the $\beta$ -galactosidase gene using pUC19.	<b>Pass</b>
<b>Phage Resistance (<math>\Phi</math> 80)</b> - 15 $\mu$ l of untransformed NEB <sup>®</sup> 5-alpha Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate does not support plaque formation by phage $\Phi$ 80 after incubation for 16 hours at 37°C.	<b>Pass</b>
<b>Transformation Efficiency</b> - 50 $\mu$ l of NEB <sup>®</sup> 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 $>1 \times 10^9$ cfu/ $\mu$ g of DNA.	<b>Pass</b>



Authorized by  
Tony Spear-Alfonso  
29 Dec 2017



Inspected by  
Lixin An  
20 Feb 2018

