

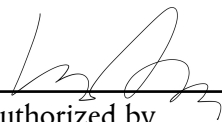
## New England Biolabs Certificate of Analysis

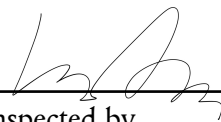
**Product Name:** NEB<sup>®</sup> 10-beta Competent *E. coli* (High Efficiency)  
**Catalog #:** C3019H/I  
**Lot #:** 3031607  
**Assay Date:** 07/2016  
**Expiration Date:** 07/2017  
**Storage Temp:** -80°C  
**Specification Version:** PS-C3019H/I v1.0  
**Effective Date:** 14 Jul 2016

Assay Name/Specification (minimum release criteria)	Lot #3031607
<b>Antibiotic Resistance (Streptomycin)</b> - 15 µl of untransformed NEB <sup>®</sup> 10-beta Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Streptomycin will form colonies after incubation for 16 hours at 37°C.	<b>Pass</b>
<b>Antibiotic Sensitivity (Ampicillin)</b> - 15 µl of untransformed NEB <sup>®</sup> 10-beta 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 <sup>®</sup> 10-beta 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 <sup>®</sup> 10-beta 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 <sup>®</sup> 10-beta 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 <sup>®</sup> 10-beta 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 (Tetracycline)</b> - 15 µl of untransformed NEB <sup>®</sup> 10-beta 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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<p><b>Blue-White Screening (<math>\alpha</math>-complementation, Competent Cells)</b> - NEB<sup>®</sup> 10-beta Competent <i>E. coli</i> (High 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> 10-beta Competent <i>E. coli</i> (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> - 50 <math>\mu</math>l of NEB<sup>®</sup> 10-beta 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 <math>&gt;1 \times 10^9</math> cfu/<math>\mu</math>g of DNA.</p>	<b>Pass</b>

  
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 Authorized by  
 Lixin An  
 14 Jul 2016

  
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 Inspected by  
 Lixin An  
 15 Jul 2016

