

## New England Biolabs Certificate of Analysis

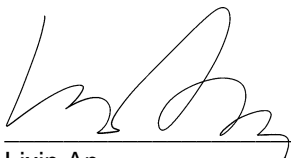
**Product Name:** NEB® 5-alpha F Iq Competent *E. coli* (High Efficiency)  
**Catalog Number:** C2992H  
**Lot Number:** 10024310  
**Expiration Date:** 10/2019  
**Storage Temperature:** -80°C  
**Specification Version:** PS-C2992H/I v1.0

NEB® 5-alpha F Iq Competent <i>E. coli</i> (High Efficiency) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
N3041AVIAL	pUC19 Vector	10017063	Pass
C2992HVIAL	NEB® 5-alpha F Iq Competent <i>E. coli</i> (High Efficiency)	10014820	Pass
B9020SVIAL	SOC Outgrowth Medium	10011188	Pass

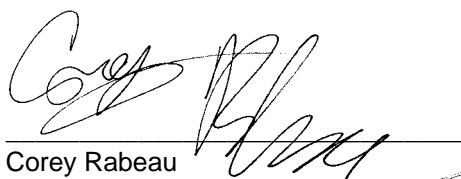
Assay Name/Specification	Lot # 10024310
<b>Antibiotic Sensitivity (Kanamycin)</b> 15 µl of untransformed NEB® 5-alpha F'Iq Competent <i>E. coli</i> (High Efficiency) streaked onto a Rich Broth plate containing Kanamycin will not form colonies after incubation for 16 hours at 37°C.	Pass
<b>Antibiotic Sensitivity (Nitrofurantoin)</b> 15 µl of untransformed NEB® 5-alpha F'Iq 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.	Pass
<b>Antibiotic Sensitivity (Spectinomycin)</b> 15 µl of untransformed NEB® 5-alpha F'Iq 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.	Pass
<b>Antibiotic Sensitivity (Streptomycin)</b> 15 µl of untransformed NEB® 5-alpha F'Iq 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.	Pass
<b>Blue-White Screening (α-complementation, Competent Cells)</b> NEB® 5-alpha F'Iq Competent <i>E. coli</i> (High Efficiency) were shown to be suitable for	Pass

Assay Name/Specification	Lot # 10024310
blue/white screening by $\alpha$ -complementation of the $\beta$ -galactosidase gene using pUC19.	
<p><b>Phage Resistance (<math>\phi</math> 80)</b> 15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 5-alpha F'Iq 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> 50 <math>\mu</math>l of NEB<sup>®</sup> 5-alpha F'Iq 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 Resistance (Tetracycline)</b> 15 <math>\mu</math>l of untransformed NEB<sup>®</sup> 5-alpha F'Iq Competent E. coli (High Efficiency) streaked onto a Rich Broth plate containing Tetracycline will 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 F'Iq 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 F'Iq 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  
13 Jul 2018



Corey Rabeau  
Packaging Quality Control Inspector  
01 Oct 2018