

## New England Biolabs Product Specification

*Product Name:* NEB<sup>®</sup> 5-alpha Competent *E. coli* (High Efficiency)  
*Catalog #:* C2987U  
*Shelf Life:* 12 months  
*Storage Temp:* -80°C  
*Specification Version:* PS-C2987U v2.0  
*Effective Date:* 27 Mar 2017

### Assay Name/Specification (minimum release criteria)

**Antibiotic Sensitivity (Ampicillin)** - 15 µl 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.

**Antibiotic Sensitivity (Chloramphenicol)** - 15 µl 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.

**Antibiotic Sensitivity (Kanamycin)** - 15 µl 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.

**Antibiotic Sensitivity (Nitrofurantoin)** - 15 µl of untransformed NEB<sup>®</sup> 5-alpha Competent *E. coli* (High Efficiency) streaked onto a Rich Broth plate containing Nitrofurantoin will not form colonies after incubation for 16 hours at 37°C.

**Antibiotic Sensitivity (Spectinomycin)** - 15 µl of untransformed NEB<sup>®</sup> 5-alpha Competent *E. coli* (High Efficiency) streaked onto a Rich Broth plate containing Spectinomycin will not form colonies after incubation for 16 hours at 37°C.

**Antibiotic Sensitivity (Streptomycin)** - 15 µl of untransformed NEB<sup>®</sup> 5-alpha Competent *E. coli* (High Efficiency) streaked onto a Rich Broth plate containing Streptomycin will not form colonies after incubation for 16 hours at 37°C.

**Antibiotic Sensitivity (Tetracycline)** - 15 µl of untransformed NEB<sup>®</sup> 5-alpha Competent *E. coli* (High Efficiency) streaked onto a Rich Broth plate containing Tetracycline will not form colonies after incubation for 16 hours at 37°C.

**Blue-White Screening (α-complementation, Competent Cells)** - NEB<sup>®</sup> 5-alpha Competent *E. coli* (High Efficiency) were shown to be suitable for blue/white screening by α-complementation of the β-galactosidase gene using pUC19.

**Phage Resistance (Φ 80)** - 15 µl 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 Φ 80 after incubation for 16 hours at 37°C.

**Transformation Efficiency** - 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 >1 x 10<sup>9</sup> cfu/µg of DNA.



Date 27 Mar 2017

Derek Robinson  
Director of Quality Control

