

## New England Biolabs Certificate of Analysis

Product Name: *NEBuilder<sup>®</sup> HiFi DNA Assembly Cloning Kit*  
 Catalog Number: *E5520S*  
 Lot Number: *10042675*  
 Expiration Date: *02/2020*  
 Storage Temperature: *Multi-temperature\**  
 Specification Version: *PS-E5520S v2.0*

\* This product contains components with different storage temperature requirements. Please reference the applicable product specification document(s) on the Quality and Safety tab located on the product page of [www.neb.com](http://www.neb.com).

NEBuilder <sup>®</sup> HiFi DNA Assembly Cloning Kit Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
N3041AVIAL	pUC19 Vector	10035844	Pass
N2611AVIAL	Gibson Assembly <sup>®</sup> Positive Control	10033510	Pass
M5520AVIAL	NEBuilder <sup>®</sup> High-Fidelity Master Mix	10033508	Pass
C2987HVIAL	NEB <sup>®</sup> 5-alpha Competent E. coli (High Efficiency)	10035617	Pass
B9020SVIAL	SOC Outgrowth Medium	10032899	Pass

Assay Name/Specification	Lot # 10042675
<p><b>Functional Testing (NEBuilder<sup>®</sup> HiFi DNA Assembly)</b>            10 µl of 2X NEBuilder<sup>®</sup> HiFi DNA Assembly Cloning Kit was incubated with 0.05 pmol each of 6 DNA fragments (4 fragments of 1,000 bp, one fragment of 1,152 bp with 80 bp overlap, and a vector of 3,373 bp with a 20 bp overlap) in a final volume of 20 µl at 50°C for 60 minutes. NEB<sup>®</sup> 5-alpha Competent E. coli (High Efficiency) were transformed with 2 µl of the assembled products. Successfully assembled fragments produce an intact lacZ gene in the pACYC184 vector, and yield blue colonies on an IPTG/Xgal/Chloramphenicol plate when incubated overnight at 37°C after transformation. Greater than 100 blue colonies were observed when 1/10 of the outgrowth (500 µl) was spread on a plate.</p>	Pass
<p><b>* Individual Product Component Note</b>            Standard Quality Control Tests are performed for each component included in NEBuilder<sup>®</sup> HiFi DNA Assembly Cloning Kit and meet the designated specifications.</p>	Pass

This product has been tested and shown to be in compliance with all specifications.

*Cathy Shea*

Cathy Shea  
Production Scientist  
21 Feb 2019

*Nick Privitera*

Nick Privitera  
Packaging Quality Control Inspector  
16 Apr 2019