

New England Biolabs Certificate of Analysis

Product Name: *Ph.D.™ -12 Phage Display Peptide Library Kit*
 Catalog Number: *E8110S*
 Packaging Lot Number: *10064791*
 Expiration Date: *02/2022*
 Storage Temperature: *-20°C*
 Specification Version: *PS-E8110S v2.0*

Ph.D.™ -12 Phage Display Peptide Library Kit Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
S1259AVIAL	-96 gIII Sequencing Primer (20-mer)	10066252	Pass
S1258AVIAL	-28 gIII Sequencing Primer (22-mer)	10066251	Pass
N7024AVIAL	Biotin	10066253	Pass
N7023AVIAL	Streptavidin, lyophilized	10060978	Pass
E8111AVIAL	Ph.D.™ -12 Phage Display Peptide Library	10064789	Pass
E4104SVIAL	E.coli K12 ER2738	10034478	Pass

Assay Name/Specification	Lot # 10064791
<p>Absolute Phage Titer Infection of a mid-log culture of E. coli ER2738 with Ph.D.™ -12 Phage Display Peptide Library followed by plating, yields $\geq 1 \times 10^{13}$ pfu/ml.</p>	Pass
<p>Functional Testing (Panning) A 100-fold representation of the Ph.D.™ -12 Phage Display Peptide Library containing approximately 10^{11} pfu is diluted in 200 μl TBS and panned against 300 ng β-endorphin monoclonal antibody. The bound phage is affinity captured using magnetic beads and eluted with 1 ml of 0.2M Glycine-HCl, pH 2.2. After three rounds of selection, $\geq 75\%$ of sequences contain a motif related to the known epitope for the antibody.</p>	Pass
<p>Phage Contamination (Environmental) A 1:100 dilution of an overnight culture of E. coli ER2738 was made in 20 ml LB, to which 10^3 pfu of Ph.D.™ -12 Phage Display Peptide Library was added. The flask was incubated at 37°C on a rotating shaker for 5 hours. A 1 ml volume of culture was removed and centrifuged. A volume of culture supernatant equivalent to the initial PFU input was added to a second, 20 ml culture like the first. The final culture supernatant was plated on three LB/IPTG/Xgal plates and then titered. Fewer than 20% clear or white plaques were observed in a minimum of 100 total plaques counted on</p>	Pass

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<p>each plate.</p> <p>Sequence Verification (DNA) The Ph.D.[™]-12 Phage Display Peptide Library was sequenced using 5'-CCCATGTACCGTAACACTGAGTTTC-3' as a primer to confirm the correct form of the cloned insert on the displayed peptide, X12-GGG.</p>	<p>Pass</p>

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

Beth M. Paschal

Beth Paschal
Production Scientist
05 Feb 2020



Josh Hersey
Packaging Quality Control Inspector
24 Mar 2020