

## New England Biolabs Product Specification

**Product Name:** *Ph.D.<sup>™</sup>-C7C Phage Display Peptide Library Kit*

**Catalog #:** *E8120S*

**Kit Components:** *Ph.D.<sup>™</sup>-C7C Phage Display Peptide Library (E8121) — Store at -20°C*  
*-96 gIII Sequencing Primer (20-mer) (S1259) — Store at -20°C*  
*-28 gIII Sequencing Primer (22-mer) (S1258) — Store at -20°C*  
*E. coli K12 ER2738 (E4104) — Store at -80°C*  
*Biotin (N7024) — Store at -20°C*  
*Streptavidin, lyophilized (N7023) — Store at -20°C*

**Shelf Life:** *24 months*

**Storage Temp:** *Multi-temperature*

**Specification Version:** *PS-E8120S v1.0*

**Effective Date:** *18 Jun 2018*

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

**Absolute Phage Titer** - Infection of a mid-log culture of *E. coli* ER2738 with Ph.D.<sup>™</sup>-C7C Phage Display Peptide Library followed by plating, yields  $\geq 1 \times 10^{13}$  pfu/ml.

**Functional Testing (Panning)** - A 100-fold representation of the Ph.D.<sup>™</sup>-C7C Phage Display Peptide Library containing approximately  $10^{11}$  pfu is diluted in 200  $\mu$ l TBS and panned against 300 ng of anti-FLAG<sup>®</sup> 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.

**Phage Contamination (Environmental)** - A 1:100 dilution of an overnight culture of *E. coli* ER2738 was made in 20 ml LB, to which  $10^5$  pfu of Ph.D.<sup>™</sup>-C7C 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. Five microliters (5  $\mu$ l) of phage-containing supernatant was used for three successive rounds of amplification. The final culture supernatant was plated on three LB/IPTG/Xgal plates and then titered. Fewer than 5% clear or white plaques were observed in a minimum of 100 total plaques counted on each plate.

**Sequence Verification (DNA)** - The Ph.D.<sup>™</sup>-C7C 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, ACX<sub>7</sub>C-GGG.



Date 18 Jun 2018

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Director of Quality Control

