

New England Biolabs Certificate of Analysis

Product Name: *Ph.D.™ -12 Phage Display Peptide Library Kit*
 Catalog Number: *E8110S*
 Packaging Lot Number: *10136923*
 Expiration Date: *09/2023*
 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) | 10130622 | Pass |
| S1258AVIAL | -28 gIII Sequencing Primer (22-mer) | 10126854 | Pass |
| N7024AVIAL | Biotin | 10111664 | Pass |
| N7023AVIAL | Streptavidin, lyophilized | 10115978 | Pass |
| E8111AVIAL | Ph.D.™ -12 Phage Display Peptide Library | 10111203 | Pass |
| E4104SVIAL | E.coli K12 ER2738 | 10124262 | Pass |

| Assay Name/Specification | Lot # 10136923 |
|---|----------------|
| <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>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 each plate.</p> | Pass |
| <p>Functional Testing (Panning) A 100-fold representation of the Ph.D.™ -12 Phage Display Peptide Library containing approximately 1011 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</p> | Pass |

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| <p>antibody.</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.

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Alicia Bielik
Production Scientist
17 Feb 2022



Josh Hersey
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17 Feb 2022