New England Biolabs
Product Specification

Product Name: Ph.D™-C7C Phage Display Peptide Library Kit
Catalog #: E8120S
Kit Components:
- Ph.D™-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™-C7C Phage Display Peptide Library followed by plating, yields ≥ 1 x 10^{13} pfu/ml.

Functional Testing (Panning) - A 100-fold representation of the Ph.D™-C7C Phage Display Peptide Library containing approximately 10^{13} pfu is diluted in 200 µl TBS and panned against 300 ng of anti-FLAG® 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, ≥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™-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 µl) 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™-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, ACXγC -GGG.

Derek Robinson
Director of Quality Control

Date 18 Jun 2018

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