

Antibody Phage Display Library Construction Kit

pAPD-h-scFv: Human scFv phage display library construction kit

Catalog#: APD-04

Product Overview

Fusion BioLabs offers a range of library primer sets and phagemid vector combination for antibody phage display and peptide phage display construction. With customizable features and robust performance, our primer sets and phagemid vectors are designed for facilitating phage display library generation as fast as within one week.

pAPD-h-scFv is the phagemid vector for construction of a single-chain variable fragment (scFv) library for **human** antibodies. Here are the key steps involved in constructing such a library:

- Amplify V genes from cDNA reverse transcript from RNA isolated from peripheral blood lymphocytes (PBL) or lymphoid tissue of non-immunized or immunized donors using PCR primers corresponding to known V_H , V_k , and V_λ gene sequences.
- Combine V_H and V_L repertoires to create the scFv construct using a simple two-fragment PCR assembly procedure.
- Restriction enzyme digestion with either SfiI or SacI/Spel
- Ligation of digested and purified scFv fragment into corresponding restriction enzymes digested and purified **pAPD-h-scFv** vector.

Key Features

High expression efficiency: Engineered for efficient expression and display of antibody fragment scFv on the surface, allowing for easy screening and selection of target molecules.

Flexibility and versatility: One vector for both antibody library construction and downstream antibody fragment expression. No need subcloning into expression vector for downstream application.

Specifications

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| Antibiotic Resistance | Ampicillin (Amp ^R) |
| Constitutive or Inducible System | Inducible for downstream expression |
| Delivery Type | Transformation |
| Product Type | Bacterial Expression Vector |
| Cloning Method | Restriction Enzyme (5'-SacI and 3'-Spel) |

Contents & Storage

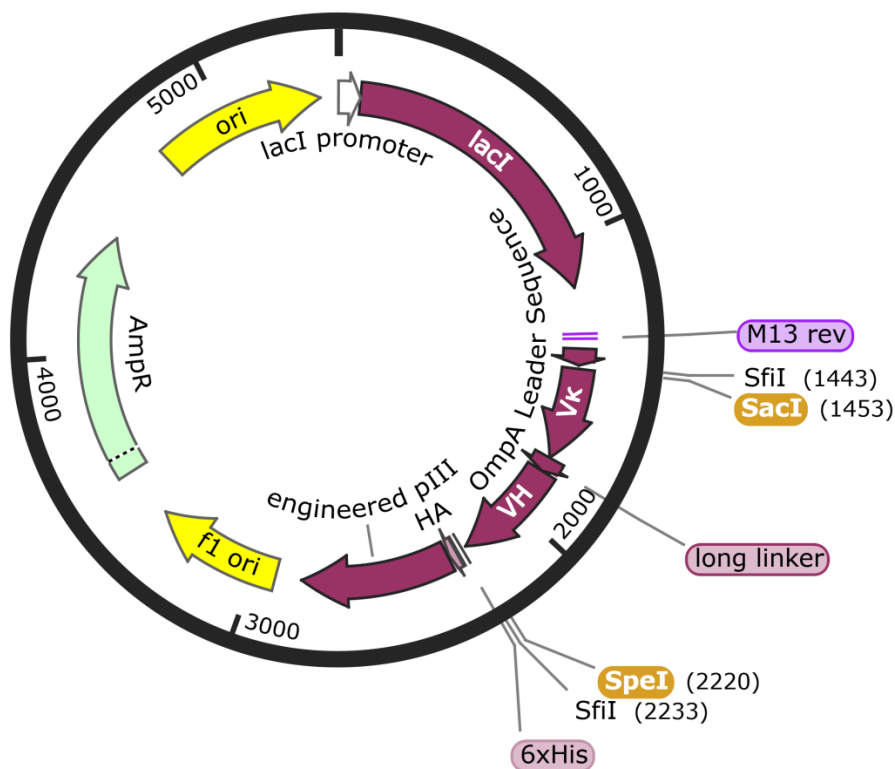
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|--|-------------------------|--|
| Primer Set 1 for amplification of human variable domain of heavy chain (V_H) and light chain (V_k and V_λ) | | |
| Vial 1 | 200 μ l, 10 μ M | Forward Primer mix (13 oligos) for V_k and V_λ amplification |
| Vial 2 | 200 μ l, 10 μ M | Reverse Primer mix (7 oligos) for V_k and V_λ amplification |



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| Vial 3 | 200 μ l, 10 μ M | Forward Primer mix (6 oligos) for V _H amplification |
| Vial 4 | 200 μ l, 10 μ M | Reverse Primer mix (5 oligos) for V _H amplification |
| Primer Set 2 for cloning/assembly human scFv (Format: V _{k,λ} -(G ₄ S) ₃ linker-V _H) | | |
| Vial 5 | 100 μ l, 10 μ M | Forward primer for human scFv cloning/assembly |
| Vial 6 | 100 μ l, 10 μ M | Reverse primer for human scFv cloning/assembly |
| pAPD-h-scFv cloning vector for phage display human scFv library construction | | |
| Vial 7 | 10.0 μ g in Tris-EDTA buffer | |

- Store at -20°C. Primer sets and vectors are guaranteed stable for 12 months when properly stored.

Vector for library Construction



Phagemid vector for human scFv library construction

5406 bp