APD-03 | Mouse Fab Phage Display Library Construction Kit

pAPD-m-Fab | Product Data Sheet

Product Overview

The Mouse Fab Phage Display Library Construction Kit (APD-03) provides specialized PCR primer mixes and the pAPD-m-Fab phagemid vector for constructing mouse fragment antigen-binding (Fab) antibody libraries. The kit supports κ- and λ-light-chain repertoires and heavy-chain repertoires, with either light-chain-first or heavy-chain-first assembly.

Library Construction Workflow

1. Amplify mouse V_H, V_κ, and V_λ repertoires from cDNA and amplify C_{H1}, C_κ, and C_λ constant-region fragments using the supplied primer sets.

2. Assemble V_H–C_{H1}, V_κ–C_κ, and V_λ–C_λ repertoires by overlap-extension PCR.

3. Digest light-chain repertoires and pAPD-m-Fab with SacI/XbaI, or digest heavy-chain repertoires and vector with XhoI/SpeI.

4. Ligate and transform to establish a light-chain or heavy-chain sub-library.

5. Complete the Fab library by inserting V_H–C_{H1} into the light-chain sub-library using XhoI/SpeI, or inserting V_κ–C_κ / V_λ–C_λ into the heavy-chain sub-library using SacI/XbaI.

Key Features

Efficient Fab display: Supports expression and phage display of mouse Fab antibody fragments for selection and screening.

Flexible library construction: Supports either light-chain or heavy-chain sub-library assembly routes.

Versatile vector: Supports phage display library construction and downstream antibody-fragment expression.

Specifications

Specification	Value
Catalog number	APD-03
Vector	pAPD-m-Fab (6,074 bp)
Antibiotic resistance	Ampicillin (AmpR)
Expression	Inducible for downstream expression
Delivery	Transformation
Product type	Phage display / bacterial expression vector
Cloning method	SacI/XbaI for light-chain repertoires; XhoI/SpeI for heavy-chain repertoires

Contents & Storage

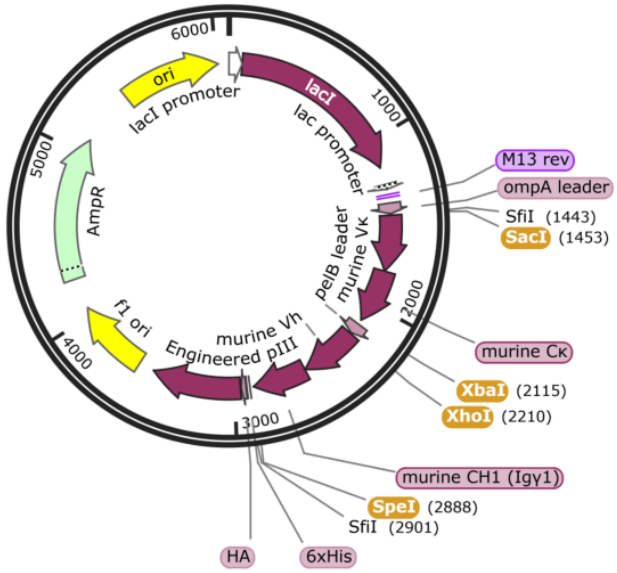
Vial	Quantity	Component
1	100 µL, 10 µM	Primer mix (F+R) for Vκ repertoire amplification
2	100 µL, 10 µM	Primer mix (F+R) for Vλ repertoire amplification
3	100 µL, 10 µM	Primer mix (F+R) for VH repertoire amplification
4	100 µL, 10 µM	Primer mix (F+R) for Cκ fragment amplification
5	100 µL, 10 µM	Primer mix (F+R) for Cλ fragment amplification
6	100 µL, 10 µM	Primer mix (F+R) for CH1 fragment amplification
7	100 µL, 10 µM	Assembly primers (F+R) for Vκ–Cκ repertoire construction
8	100 µL, 10 µM	Assembly primers (F+R) for Vλ–Cλ repertoire construction
9	100 µL, 10 µM	Assembly primers (F+R) for VH–CH1 repertoire construction
10	100 µL, 10 µM	M13 Reverse primer for forward sequencing
11	100 µL, 10 µM	pIII Reverse primer for reverse sequencing
12	10.0 µg in TE buffer	pAPD-m-Fab cloning vector

Storage: Store at −20°C. Primer sets and vector are guaranteed stable for 12 months when properly stored.

Vector for Library Construction

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

Vector for library Construction



phagemid vector for mouse Fab library construction
6074 bp

pAPD-m-Fab circular phagemid vector (6,074 bp). The vector map identifies SacI (1453), XbaI (2115), XhoI (2210), SpeI (2888), and SfiI (1443 and 2901) sites. The documented APD-03 cloning workflows use SacI/XbaI and XhoI/SpeI.

Vector Usage: Clone mouse Fab repertoires for phage display library construction and selected Fab candidates for downstream antibody-fragment expression.

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