Antibody Phage Display Library Construction Kit

pAPD-ck-scFv: Chicken scFv phage display library construction kit

Catalog#: APD-07

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-ck-scFv is the phagemid vector for construction of a single-chain variable fragment (scFv) library from **chicken IgY** 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 and V_L gene sequences.
- Combine V_H and V_L repertoires to create the scFv construct (VH-$(G_4S)_3$ linker using a simple two-fragment PCR assembly procedure.
- Restriction enzyme digestion with either [double 5'end and 3'end SfiI sites] or [5'end SacI and 3' end SpeI sites].
- Ligation of digested and purified scFv fragment into corresponding restriction enzymes digested and purified **pAPD-ck-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

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

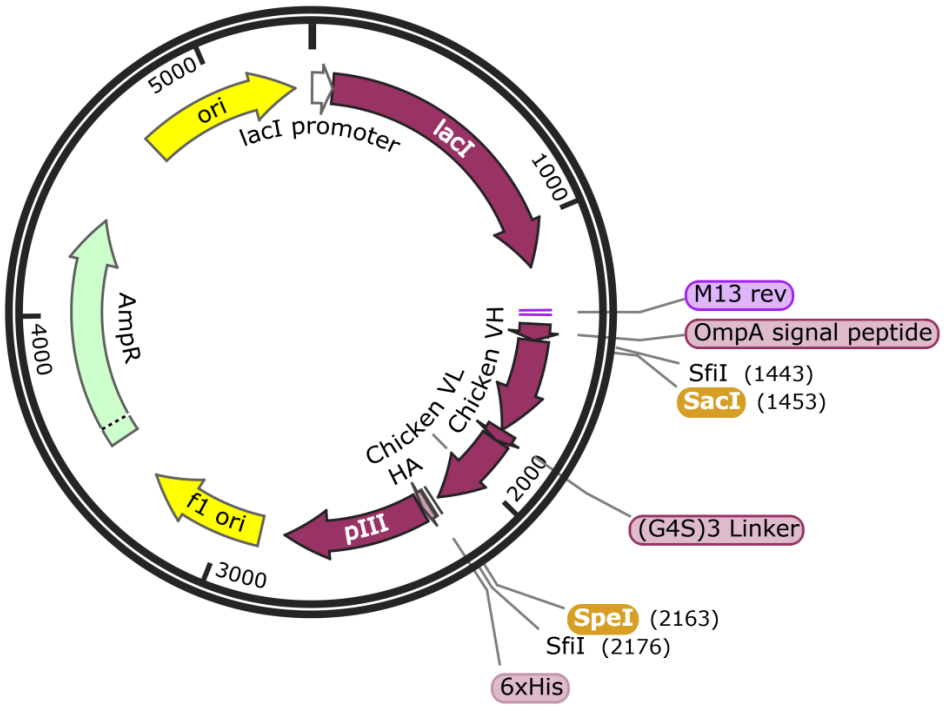
Contents & Storage

Primer for amplification of chicken variable domain of heavy chain (V_H) and light chain (V_L)		
Vial 1	100 µl, 10 µM	Primers (normalized forward and reverse primer mix) for V_H repertoires amplification

Vial 2	100 µl, 10 µM	Primers (normalized forward and reverse primer mix) for V_L repertoires amplification
Primer Set for Cloning/assembly chicken scFv (Format: V_H-$(G_4S)_3$ linker-V_L)		
Vial 3	100 µl, 10 µM	Primers (Forward primer and reverse mix) for chicken scFv repertoires assembly
Sequencing Primer set		
Vial 4	100 µl, 10 µM	M13 Reverse primer for scFv forward sequencing
Vial 5	100 µl, 10 µM	pIII Reverse primer for scFv reverse sequencing
pAPD-ck-scFv cloning vector for phage display chicken scFv library construction		
Vial 6	10.0 µg 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 chicken scFv library construction
5349 bp