AccuRapid™ Cloning Kit

[Cat. No.] K-7110, K-7120, K-7130

Introduction

AccuRapid™ Cloning Kit is designed for directional cloning of up to 3 PCR products into linearized vectors without the need for restriction enzymes, ligase, or phosphatase. This kit contains an optimized Enzyme Mix, which fuses PCR products and linearized vectors by annealing a 18-21 bp complementary sequence located at their ends. The 18-21 bp homologue sequence is added to the extension primers for the amplification of the inserts.

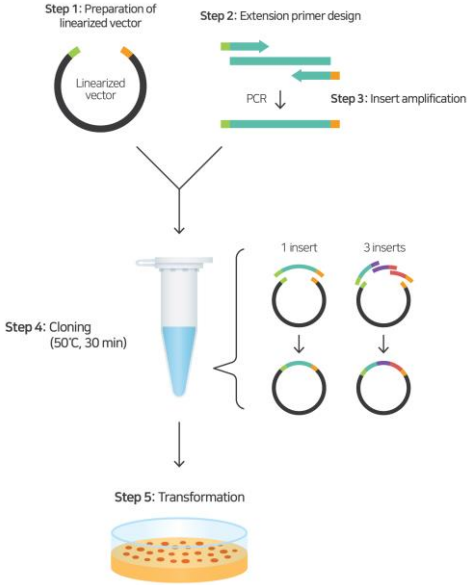


Figure 1. Workflow for cloning

Features & Benefits

- Convenient: Directional cloning of inserts into a vector is possible without the use of restriction enzymes, a ligase, or a phosphatase.
- Rapid: Clones accurately in 30 min.
- Accurate: Cloning of up to 3 inserts is possible through precise design of extension primers.

Components

Components	K-7110
AccuRapid™ Enzyme Mix	45 µl
2 kb pBHA Control Vector (25 ng/µl)	3 µl
750 bp Control Insert (50 ng/µl)	5 µl

*** Note**: For research use only. Not for use in diagnostic or therapeutic procedures.

Storage

- Store at -20°C.

Online Resources

Korean **English**

Visit our **product page** for additional information and protocols.

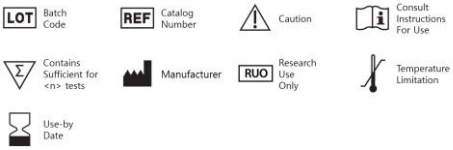
Ordering Information

Description		Cat. No.
AccuRapid™ Cloning Kit	10 rxns x 1 ea	K-7110
	10 rxns x 2 ea	K-7120
	10 rxns x 5 ea	K-7130

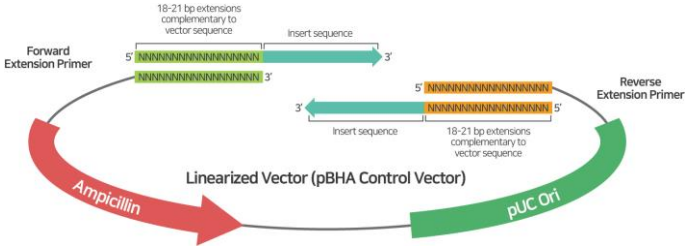
Notice

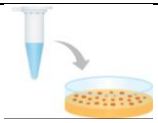
BIONEER corporation reserves the right to make corrections, modifications, improvements and other changes to its products, services, specifications or product descriptions at any time without notice.

Explanation of Symbols



Experimental Procedures

<table>
<tr><th colspan="2">Steps</th><th>Procedure Details</th></tr>
<tr><td>1</td><td> 
Preparation of linearized vector</td><td>1. Prepare a linearized vector through PCR or treatment with restriction enzymes.</td></tr>
<tr><td>2</td><td> 
Extension primer design</td><td>2. Design extension primers which contain a 18-21 bp complementary sequence at the end of a linearized vector.
 

* Note: Refer to the User's guide for additional information.</td></tr>
<tr><td>3</td><td> 
Insert amplification</td><td>3. Perform the PCR for the amplification of insert.
4. Purify the samples using a PCR/Gel purification kit.</td></tr>
<tr><td>4</td><td> 
Cloning</td><td>5. Prepare the reaction mixture.
• Preparation of reaction mixture
<table>
<tr><th>Components</th><th>Negative</th><th>Positive</th><th>Sample</th></tr>
<tr><td>Linearized Vector (25-50 ng)</td><td>1 µl</td><td>1 µl</td><td>1 µl</td></tr>
<tr><td>Purified PCR products (70-150 ng)</td><td>-</td><td>1.5 µl</td><td>Variable†</td></tr>
<tr><td>Distilled water</td><td>5 µl</td><td>3.5 µl</td><td>Variable</td></tr>
<tr><td>AccuRapid™ Enzyme Mix</td><td colspan="3">4 µl</td></tr>
<tr><td>Total volume</td><td colspan="3">10 µl</td></tr>
</table>
* Note: After cloning the reaction mixture should be stored either on ice or at -20°C until transformation.
† Purified PCR products need to be 70-150 ng/rxn totally, and 5 µl maximum in volume.
ex) 1 fragment: 5 µl, 2 fragments: 2.5 µl x 2, 3 fragments: 1.7 µl x 3
6. Mix the reaction mixture by tapping the tube gently and briefly spin down.
7. Incubate the reaction mixture for 30 min at 50°C.</td></tr>
<tr><td>5</td><td> 
Transformation</td><td>8. Add the reaction mixture to the E. coli cells to be transformed.</td></tr>
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