ShortSeq Library Prep Kit

Instruction for Use

【Product Name】

ShortSeq Library Prep Kit

【Cat. No./Spec.】

K009-A(24 rxns); K009-B (96 rxns)

【Product Description】

The kit provides a convenient and fast DNA Illumina library construction solution for short sequence DNA samples such as PCR products and plasmids, which requires only three simple steps, greatly reducing library construction time and errors caused by troublesome steps. The library can be built quickly for PCR products or plasmids of 150-30,000 bp without primer synthesis, and the DNA can be multiplexed PCR amplification products.

【Storage Condition & Shelf Life】

All reagents should be stored at -20°C. ShortSeq Buffer B will precipitate crystals at low temperature, which is normal. It should be balanced to room temperature and completely dissolved before use. The product is valid for 24 months.

【Components】

Component	24 rxns	96 rxns
ShortSeq Mix	450 μl	2 × 960 μl
ShortSeq Buffer B	50 μl	400 μl
2× HIFI Library PCR Master Mix	240 μl	960 μl
Primer Mix*	24 μl	96 μl

*For multiple samples, GENEKRAS adapter primer combinations are recommended, and this kit provides a set of primers with index.

Note: # NC1011 GDSPure DNA Selection Magbeads or AMPure XP beads are recommended as selection magnetic beads.

【Protocol】

1. Fragmentation

ShortSeq Library Prep Kit experiments require 2 μl of samples at concentrations between 0.1 ng/μl and 5 ng/μl.

(1) Preparation of reaction solution as follow:

Component	Volume
ShortSeq Mix	18 μl
PCR fragments/Plasmids 0. 1-5 ng/ μl	2 μl

(2) Mix by pipetting up and down 10 times and briefly centrifuge to bring all liquid to the bottom of the tube.

(3) Program the thermal cycler as follows:

Heated lid	99℃
55℃	10 min
4℃	Hold

2. End the reaction

Add 2 μl ShortSeq Buffer B to 20 μl of the reaction system after fragmentation and mix well, briefly centrifuge to bring all liquid to the bottom of the tube and perform the following reaction in the PCR instrument:

Heated lid	99℃
55℃	5 min
4℃	Hold

3. PCR

(1) Preparation of reaction solution as follow in a new tube:

Component	Volume
2 × HIFI Library PCR Master Mix	10 μl
Primer Mix	2 μl
Second step products	4 μl
ddH_2O	To 20 μl

(2) Mix by pipetting up and down 10 times and briefly centrifuge to bring all liquid to the bottom of the tube.

(3) Put the tube into the instrument for PCR, set program as follow:

9 5℃	3min	1 cycle
9 5℃	15s	10-20 cycles
5 8℃	15s	
7 2℃	25s	
4℃	∞	-

4. Sequencing instructions

Primer Mix/N501N701

Examples of sequencing company tables: Mingma Technologies

Sublibrary Name*	index i7*	index i5*(for Nova1.5 reagents, the same as the i5 index for HiSeq 3000, 4000, NextSeq®, MiniSeq® , HiSeq X10 platforms)
N501N701	TAAGGCGA	GCGATCTA

【Note】

1. This kit uses transposase, and the library construction efficiency is very sensitive to the ratio of reagents and the amount of DNA input, so please add samples accurately according to the amount.
2. ShortSeq Buffer B can be stored at room temperature. If stored at low temperature, precipitation may occur and can be used after thawing at room temperature and mixing.
3. Other reagents are stored at - 20 ℃ for a long time, and repeated freeze-thaw for less than 10 times has little effect. It can be stored at 4 ℃ for short term (1 month) storage.
4. Transposase library construction is sensitive, and care is taken to prevent bacterial and DNA contamination.

This product is for research use only.