NGS Barcode Adapters 1-16 Kit for Ion Torrent

Ion Torrent Second Generation Sequencing Junction Primer Kit (1-16)

Catalog number: N670210 (16 × 10 μl)

Storage condition: -20℃ for storage, ice pack for transportation.

Products content

Component	16×10 μl
Ion P1 Adapter (10 μM)	160 μl
Ion Barcode Ax (10 μM)	16 tubes × 10 μl

Products Introduction

NGS Barcode Adapters for Ion Torrent (1-16) are specialized kits for building libraries for Ion Torrent high-throughput sequencing platforms such as the Ion PGM™ System, Ion Proton™ System, Ion S5™ System, and Ion GeneStudio™ S5 Series System. It can be used to construct multi-sample targeted sequencing DNA libraries for Ion Torrent high-throughput sequencing platforms such as Ion PGM™ System, Ion Proton™ System, Ion S5™ System and Ion GeneStudio™ S5 Series System. This kit contains the P1 Adaptor used in library construction for the Ion Torrent sequencing platform and 16 different Barcode A1 to Barcode A16 connectors, which are compatible with the CombiSeq Second Generation Sequencing Rapid DNA Library Construction Kit (Ion Torrent,) and AmpliSeq Second Generation Sequencing DNA Library Construction Kit (Ion Torrent,) and the AmpliSeq Second Generation Sequencing Library Construction Kit (Ion Torrent,). The AmpliSeq DNA Library Construction Kit (Ion Torrent,) can be used to construct 16 index-labeled DNA libraries for sequencing analysis. All reagents provided in the kit are subjected to stringent quality control and functional validation to ensure maximum reliability of sample identification, stability and reproducibility of library construction.

caveat

1. Adapter is a double-chain structure, please do not leave it above room temperature to avoid unraveling of the chain, which may affect the use.

2. Centrifuge the Barcode Adapter briefly before uncapping so that the liquid collects at the bottom of the tube and does not differ from the Barcode Adapter.

Cross-contamination.

procedure

Each Barcode Adapter package in this kit is sufficient for library construction of ≤14 100 ng Input DNA or 1 1 μg Input DNA. The amount of Barcode Adapter used can be adjusted according to the starting amount of sample DNA for optimal use.

The following examples of operations were performed according to the CombiVision Second Generation Sequencing Rapid DNA Library Building Kit (Ion Torrent):

1. Add the following reagents sequentially to a new 0.2 ml PCR tube and mix well.

Component	Volume	Volume
	50-100-ng DNA Input	1-μg DNA Input
End Repaired DNA Fragment	60 μl	60 μl
Ligation and Nick Repair Buffer	10 μl	10 μl
Ion P1 Adapter	7 μl (1 μM)	7 μl(10 μM)
Ion Barcode Ax	7 μl (1 μM)	7 μl(10 μM)
Nuclease-free Water	12 μl	10 μl
DNA Ligase	2 μl	4 μl
Bst DNA Polymerase	2 μl	2 μl
Total volume	100 μl	100 μl

Note: It is recommended that the molar ratio of the amount of Adaptor added to the DNA fragments is 10:1-20:1, please refer to the instruction manual of CombiVision Second Generation Sequencing Rapid DNA Library Building Kit (Ion Torrent, CW2639) for the specific concentration and amount of Adaptor to be used: when the amount of DNA is 10-100 ng, it is recommended to use the following concentrations of Adaptor When the amount of DNA is 10-100 ng, Adaptor recommends using 1 μM (<260 bp) or 0.5 μM (300-400 bp); when the amount of DNA is 1 μg, Adaptor recommends using 10 μM (<260 bp) or 5 μM (300-400 bp).

2. Place the PCR tube in the PCR instrument with the heat cap set to 80°C and run the following program:

Stage	Temperature	Time
Hold	25°C	15 minutes
Hold	65°C	5 minutes
Hold	4°C	Hold

Note: Please proceed to the next step as soon as possible after connecting the junction for purification of the junction-connected product.

Sequence information

Ion P1 Adapter: 5'-CCACTACGCCTCCGCTTTCCTCTCTATGGGCAGTCGGTGAT-3' Ion Barcode Ax: 5'- CCATCTCATCCCTGCGTGTCTCCGACTCAGXXXXXXXXXXXXGAT-3'

*The underlined marker sequence X is the barcode sequence for sequencing.

The sequence of the barcode corresponding to each Barcode Adapter is as follows:

Component	Barcode
Ion Barcode A1	CTAAGGTAAC
Ion Barcode A2	TAAGGAGAAC
Ion Barcode A3	AAGAGGATTC
Ion Barcode A4	TACCAAGATC
Ion Barcode A5	CAGAAGGAAC
Ion Barcode A6	CTGCAAGTTC
Ion Barcode A7	TTCGTGATTC
Ion Barcode A8	TTCCGATAAC
Ion Barcode A9	TGAGCGGAAC
Ion Barcode A10	CTGACCGAAC
Ion Barcode A11	TCCTCGAATC
Ion Barcode A12	TAGGTGGTTC
Ion Barcode A13	TCTAACGGAC
Ion Barcode A14	TTGGAGTGTC
Ion Barcode A15	TCTAGAGGTC
Ion Barcode A16	TCTGGATGAC