



NGS Barcode Adapters 1-16 for Ion Torrent

Product Number: PCK01

Shipping and Storage

Stored at -20 °C, transported in ice bags.

Components

Component	PCK01
	16×10μl
Ion P1 Adapter (10 μM)	160 μl
Ion Barcode Ax (10 μM)	16 tubes×10μl

Description

NGS Barcode Adapters for Ion Torrent (1-16) is a specialized kit for constructing high-throughput sequencing platform libraries for Ion Torrent, which can be used to construct multi sample targeted DNA libraries suitable for the 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 16 different Barcode connectors, including P1 Adaptor and Barcode A1 to Barcode A16, which used in the construction of Ion Torrent sequencing platform libraries. It can be used to construct 16 index labeled DNA libraries for sequencing analysis. All reagents provided in the kit have undergone strict quality control and functional verification, ensuring the reliability of sample identification, stability and repeatability of library construction to the greatest extent possible.

Note

1. The Adapter has a double chain structure, please do not place it above room temperature to avoid chain breaking and affecting its use.
2. Before opening the Barcode Adapter cover, please briefly centrifuge to collect the liquid to the bottom of the tube to avoid cross contamination between different Barcode Adapters.

Protocol

The packaging quantity of each Barcode Adapter in this kit is sufficient to construct a library of ≤14 100 ng Input DNA or 1 1μg Input DNA. The amount of connector usage can be adjusted based on the initial amount of sample DNA to achieve the optimal usage effect. The amount of connector usage can be adjusted based on the initial amount of sample DNA to achieve the optimal usage effect.

1. Add the following reagents in a new 0.2 ml PCR tube and mix thoroughly.

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

Note: Suggest a molar ratio of 10:1 to 20:1 between the amount of adapter added and the DNA fragment. When the DNA content is between 10 and 100 ng, the adapter recommends using a concentration of 1μM (less than 260bp) or 0.5μM (300-400 bp); When the DNA content is 1μg, the adapter recommends using a concentration of 10μM (less than 260bp) or 5μM



(300-400bp).

2. Place the PCR tube in the PCR instrument, set the heat cap 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:After connecting the connector, please proceed to the next step as soon as possible to purify the product of the connector connection.

Sequencing Information

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

***The underlined sequence X represents the barcode sequence during sequencing.**

The sequence of barcodes 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