

# NGS Barcode Adapters 1-16 Kit for Ion Torrent

**Cat. No. :** CW3001M (16×10 μL).

**Shipping and Storage :** Store at -20°C and transport on dry ice.

## Components

Component	CW3001M
	16×10 μL
Ion P1 Adapter (10 μM)	160 μL
Ion Barcode Ax (10 μM)	16 tubes×10 μL

## Introduction

NGS Barcode Adapters for Ion Torrent (1-16) is a dedicated companion kit for the Ion Torrent high-throughput sequencing platform library preparation that can be used to prepare multi-sample targeted sequencing DNA library for Ion Torrent high-throughput sequencing platforms like Ion PGM™ System, Ion Proton™ System, Ion S5™ System, Ion GeneStudio™ S5 Series System, etc. This kit contains 16 different Barcode connectors of P1 Adaptor and Barcode A1 to Barcode A16 used in the library preparation for Ion Torrent sequencing platform, and can be used with Cowin's NGS Fast DNA Library Prep Set for Ion Torrent (CW2639) and AmpliSeq Sequencing DNA Library Construction Kit (Ion Torrent, CW3000) to prepare 16 kinds of index-tagged DNA libraries for sequencing analysis. All reagents provided in the kit have undergone rigorous quality control and functional verification to maximize the reliability of sample identification, stability and reproducibility of library preparation.

## Note

1. Adapter is a double-chain structure, do not place it above room temperature to avoid unchain and affect the use.
2. Before opens the cover of the Barcode Adapter, please centrifuge briefly to collect the liquid to the bottom of the tube to avoid cross-contamination of different Barcode adapters.

## Protocol

The packaging amount of each Barcode Adapter in this kit is sufficient to prepare  $\leq 14$  libraries of 100 ng Input DNA or 1 library of 1  $\mu\text{g}$  Input DNA. The amount of adapters used can be adjusted according to the starting amount of DNA in the sample for optimal use.

The following operation example is carried out according to the manual of Cowin's NGS Fast DNA Library Prep Set for Ion Torrent (CW2639).

1. Add the following reagents sequentially in a new 0.2 mL PCR tube and mix well.

Component	Volume	
	50-100-ng DNA Input	1- $\mu\text{g}$ DNA Input
End Repaired DNA Fragment	60 $\mu\text{L}$	60 $\mu\text{L}$
Ligation and Nick Repair Buffer	10 $\mu\text{L}$	10 $\mu\text{L}$
Ion P1 Adapter	7 $\mu\text{L}$ (1 $\mu\text{M}$ )	7 $\mu\text{L}$ (10 $\mu\text{M}$ )
Ion Barcode Ax	7 $\mu\text{L}$ (1 $\mu\text{M}$ )	7 $\mu\text{L}$ (10 $\mu\text{M}$ )
Nuclease-free Water	12 $\mu\text{L}$	10 $\mu\text{L}$
DNA Ligase	2 $\mu\text{L}$	4 $\mu\text{L}$
Bst DNA Polymerase	2 $\mu\text{L}$	2 $\mu\text{L}$
Total volume	100 $\mu\text{L}$	100 $\mu\text{L}$

**Note:** It is recommended that the molar ratio of the amount of adapter to the DNA fragment is 10:1-20:1. Please refer to the instruction manual of Cowin's NGS Fast DNA Library Prep Set for Ion Torrent (CW2639). If the amount of DNA is 10-100 ng, adapter concentration of 1  $\mu\text{M}$  (less than 260 bp) or 0.5  $\mu\text{M}$  (300-400 bp) is recommended. If the amount of DNA is 1  $\mu\text{g}$ , adapter concentration of 10  $\mu\text{M}$  (less than 260 bp) or 5  $\mu\text{M}$  (300-400 bp) is recommended.

2. Place the PCR tube in the thermal cycler, set the hot lid 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 ligating the adapter, please proceed to the next step as soon as possible to purify the adapter ligation product.