CWBIO
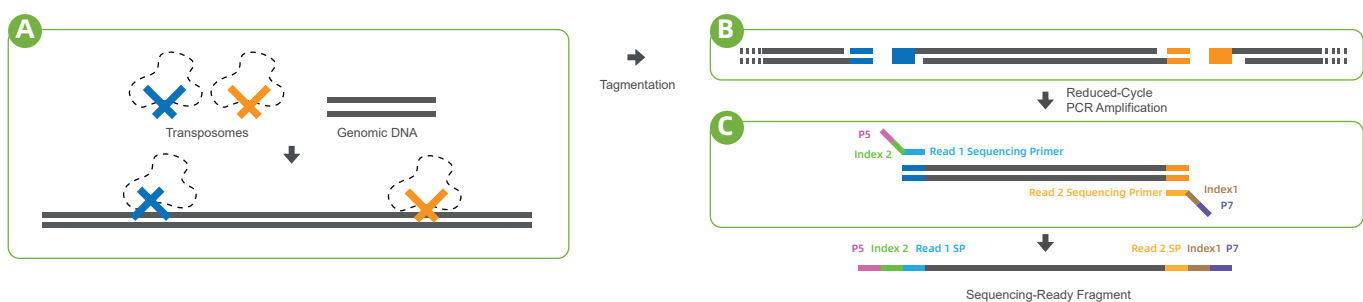
Rapid Library Preparation, Effortless Operation
-NGS TPH DNA Library Prep Set

Product Introduction

This product is a specially developed kit for the Illumina high-throughput sequencing platform, and has multiple specifications for different DNA inputs (50 ng/5 ng/1 ng). It provides the enzyme master mix and reaction buffer required for genomic DNA library preparation, and contains all components except PCR primers. Compared with the traditional library preparation kit, this kit uses a new transposase method for library preparation. It can complete the DNA fragmentation, end repair and adapter ligation reaction through a simple enzymatic reaction, which significantly reduces the amount of template used, reduces the experimental operation steps, and shortens the library preparation time. This kit uses high-fidelity DNA polymerase for library enrichment, performs PCR amplification without preference, and expands the coverage area of the sequence, which can effectively prepare DNA libraries for Illumina second-generation sequencing platform. The kit is suitable for starting template DNA inputs of 50 ng. All reagents in the kit have undergone strict quality control and functional validation to ensure maximum stability and reproducibility of library preparation.

Library Preparation Process

Product Features

- **Rapid library preparation:** High-quality library preparation can be completed in 90 minutes and get excellent sequencing quality.
- **Operation in one tube:** DNA fragmentation and adapter ligation are completed in one step.
- **Good uniformity of library amplification:** For DNA samples with different GC content, good uniformity of library preparation can be obtained.
- **Clear library:** It is highly tolerant to a variety of PCR inhibitors, and can directly amplify complex samples such as blood and serum.

Product Performance

Rapid library preparation in one tube

Experiment design 1: Using human genome DNA as the template, CoWin's NGS TPH DNA Library Prep Set for Illumina (CW2845) was used to compare the library preparation effect with the same kit of N Company, and the results are as follows:
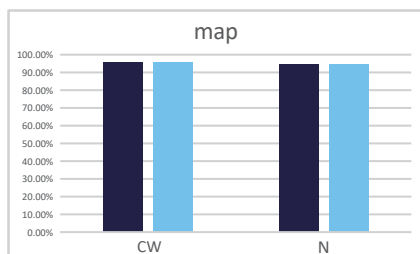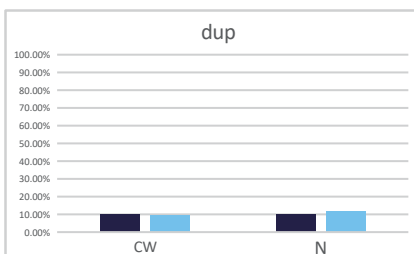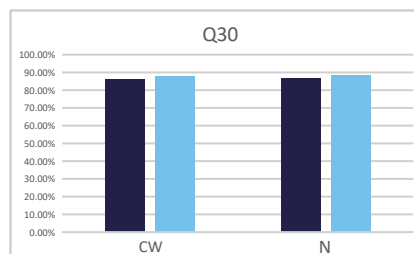

Figure 1.map

Figure 2.dup

Figure 3. Q30

The results showed that compared with the same products, CW2845 showed good performance in sequencing accuracy, coverage rate and repetition rate.

Good uniformity of library amplification

Experiment design 2: Human genomic DNA with different GC content was used as the template, CoWin's NGS TPH DNA Library Prep Set for Illumina (CW2845) was used for library preparation, and similar products of N Company were compared with Illumina sequencing platform for sequencing verification. The results are as follows:
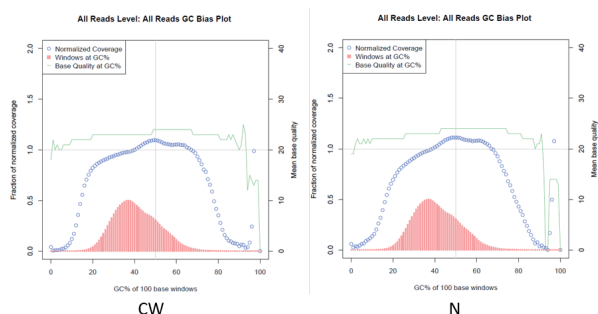

Figure 4. Sequencing uniformity of samples with different GC content

The results showed that for genomic templates with different GC content, CW2845 can obtain uniform GC coverage.

Experiment design 3: The human genome library prepared by CoWin's NGS TPH DNA Library Prep Set for Illumina (CW2845) was selected with 1X magnetic beads. The results are as follows:

Figure 5. The result of bead-based size selection

The results showed that Using CW2845 can obtain an excellent result of bead-based size selection.

Product Infromation

Cat. No.	Product Name	Specification
CW2845M	NGS TPH DNA Library Prep Set for Illumina (50 ng)	96 rxns
CW2846M	NGS TPM DNA Library Prep Set for Illumina (5 ng)	96 rxns
CW2847M	NGS TPL DNA Library Prep Set for Illumina (1 ng)	96 rxns