iGeneTech 艾吉泰康

IGT® Enzyme Plus Library Prep Kit V3

Improved Efficiency and Performance for Library Construction

IGT® Enzyme Plus Library Prep Kit V3 provides you a fast and streamlined workflow for NGS library preparation with enzymatic fragmentation strategy. The kit enables tunable fragmentation for different insert sizes according to experimental requirements and is suitable for genomic DNA and FFPE DNA samples with ranged sample input to generate satisfied yield. To achieve good performance with increased sequencing efficiency, IGT® Enzyme Plus Library Prep Kit V3 is designed to have lower artifact rate and could tolerate EDTA residual. Together with IGT® Adapter & indexed primer, the kit is compatible with both Illumina and MGI sequencing platforms.

Simplified and Streamlined Workflow

One-tube reaction combines fragmentation, end repair and A-tailing

Tunable Fragmentation

Adjust fragmentation time to generate desired insert size

Reduced Artifact Rate

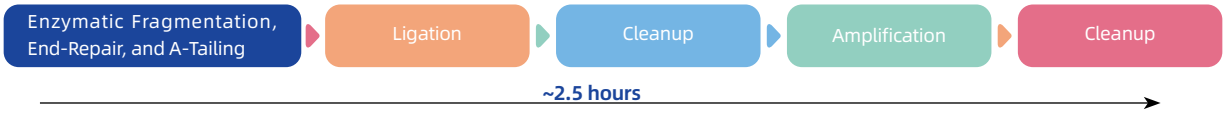
Increased sequencing accuracy and data-efficiency

Superior Performance

Consistent excellent performance across different target enrichment panels, sample types and sample inputs

FAST AND CONVENIENT WORKFLOW

IGT® Enzyme Plus Library Prep Kit V3 incorporates enzymatic fragmentation, end-repair and A-tailing in an one-tube reaction, which minimizes the hand-on operation time and reduces the possibility for handling errors. The whole workflow takes about 2.5 hours in total to generated high quality libraries for subsequent target enrichment or direct sequencing.



CONSISTENT PERFORMANCE WITH DIFFERENT SAMPLE INPUT

IGT® Enzyme Plus Library Prep Kit V3 could fulfill the demand of library yield and size across a range of genomic and FFPE DNA input (usually 5~500 ng, FFPE DNA depends on the sample quality) with recommended PCR cycles of amplification.

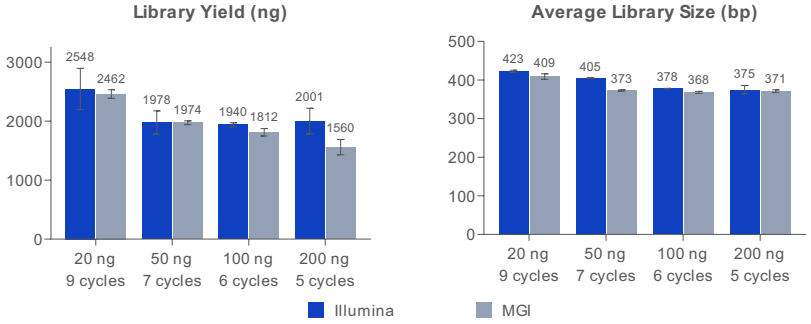


Figure 1. Performance of IGT® Enzyme Plus V3 across different sample inputs. Genomic DNA sample was used for Library preparation with input of 20 ng, 50 ng, 100 ng, and 200 ng. The enzymatic fragmentation time was set to be 30 min and number of PCR cycles for each input was 9, 7, 6, and 5, respectively. IGT® Adapter & UDI Primer 1-96 (for Illumina) and IGT® Adapter & UDI Primer 1-96 (for MGI) were used for Illumina and MGI sequencing platforms, respectively.

TUNABLE AND TRUSTED FRAGMENTATION

By using IGT® Enzyme Plus Library Prep Kit V3 for library construction, the library insert size is adjustable by simply varying enzymatic fragmentation time to meet your experimental needs. The libraries are generated with consistent sufficient yield for your subsequent steps.

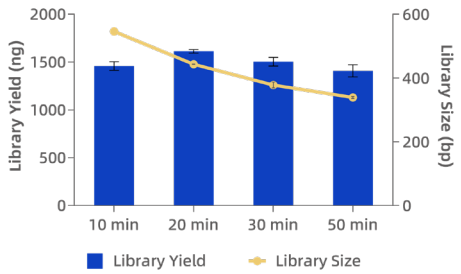


Figure 2. Performance of IGT® Enzyme Plus V3 with different fragmentation times. gDNA sample (G3041, Promega) was used for Library preparation with input of 200 ng. The enzymatic fragmentation time was set to be 10 min, 20 min, 30 min, and 50 min, respectively. PCR cycles number for amplification was 5 for all reactions.

REDUCED ARTIFACT RATE FOR EFFICIENT SEQUENCING

During library preparation, inappropriate DNA ligation or recombination may happen, leading to sequencing error that the reads are mapped to two different, non-overlapping locations of the genomic DNA. IGT® Enzyme Plus Library Prep Kit V3 could have a significant low artifact rate (0.015% for reference standard samples) with reduced fraction of chimeric reads, which significantly preserve the sequencing efficiency and accuracy.

SUPERIOR PERFORMANCE IN TARGET ENRICHMENT

Generating high quality and usable libraries is an essential step for the subsequent target enrichment process as well as the final data analysis. Based on libraries prepared by IGT® Enzyme Plus Library Prep Kit V3, your can perform target enrichment flexibly by using your panels with varies of sizes or regions of interest. Constructed by IGT® Enzyme Plus Library Prep Kit V3, libraries were captured by panels with different sizes. The testing results showed high data quality and superior performance of coverage and uniformity.

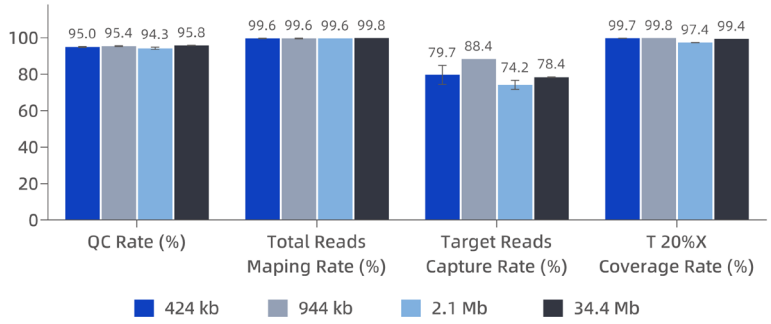


Figure 3. Target enrichment performance of different panel sizes based on library preparation using IGT® Enzyme Plus V3. Libraries were prepared from genomic DNA sample with 200 ng of input. The enzymatic fragmentation time was set to be 30 min. 500 ng of the pre-captured libraries were used for target enrichment with panel size of 424 kb, 944 kb, 2.1 Mb and 34.4 Mb. Sequencing was performed on Illumina NovaSeq 6000 platform with PE150.

ORDERING INFORMATION

Product	Cat #
IGT® Enzyme Plus Library Prep Kit V3, 16/96/960 rxn	C11111/C11112/C11113
IGT® Enzyme Plus Library Prep Kit V3 Eco, 16/96/960 rxn	C11121/C11122/C11123

FOR MORE PRODUCT AND ORDERING INFORMATION, VISIT https://www.igenetech.com/

iGeneTech Bioscience Co., Ltd.
www.igenetech.com / sales_int@igenetech.com
Add: Level 3, Block A, Building 9, No. 8 Shengmingyuan Road, Changping District, Beijing 102206, China

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