Automating QIAseq® Targeted DNA Pro on firefly®

Introduction

The QIAseq® Targeted DNA Pro enable streamlined Sample to Insight, targeted next-generation sequencing (NGS) of DNA. This highly optimized, automation-friendly solution facilitates ultrasensitive variant detection using integrated unique molecular indices (UMIs) from cells, tissue, and biofluids within 6 hours. In the following, we demonstrate that the QIAseq Targeted DNA Pro workflow has been successfully automated on our easy-to-use firefly® platform.

Workflow overview

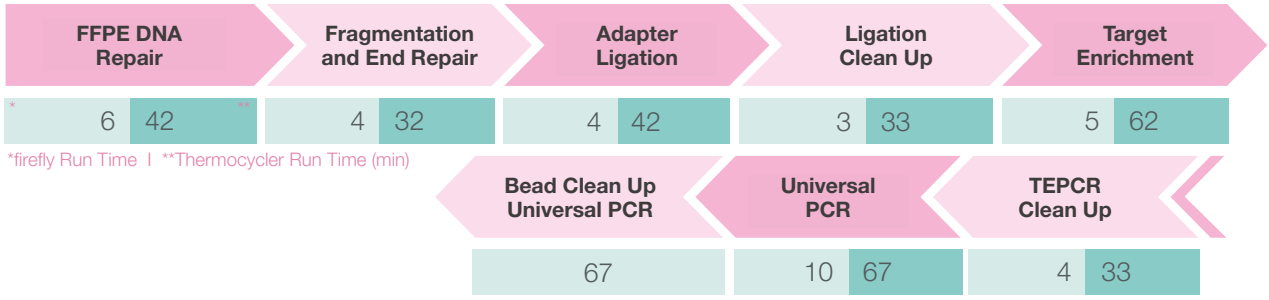

Figure 1. Overview of the steps performed by firefly to automate QIAseq® Targeted DNA Pro with run times for firefly and the thermocycler. Input of 80 ng for Promega gDNA control samples and 250 ng for the FFPE control samples.

Protocol performance

QC Data QIAseq® Targeted DNA Pro

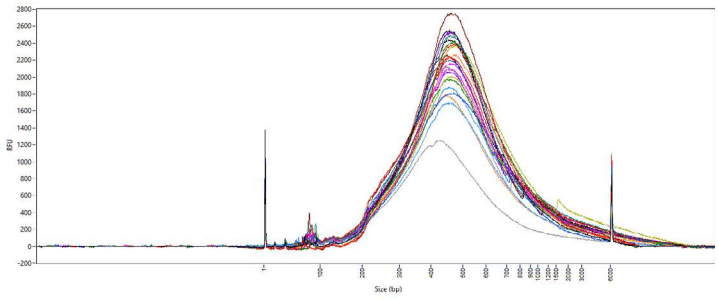

Figure 2. Fragment size distribution of the QIAseq® Targeted DNA Pro libraries analysed using the Fragment Analyzer.

	Frag. Analyzer 100-5000 bp Avg. Size (bp)	Avg. qPCR conc. (nmol)
All samples	556	128
80ng input gDNA only	558	133
250ng FFPE DNA only	545	94

Table 1. qPCR concentration (nmol) and size (bp) of the final libraries shown in Figure 2.

Conclusion

The QIAseq Targeted DNA Pro workflow has been successfully automated on firefly and can be completed within one day, enabling a streamlined end-to-end solution while reducing hands-on time and the potential for human error during library preparation.

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