MODULAR ACCESSORIES

CELEMICS PRODUCTS & SERVICES 2021

Library Preparation Kit - Standard / EP
Double-Stranded cDNA Synthesis Kit
Hybridization Enhancer
CeleMag™ Clean-up Bead
CeleMag™ Streptavidin Bead
CLM Polymerase
Bioinformatics Software

CELEMICS

Celemics Library Preparation Kit
Standard / EP

DESCRIPTION

Celemics Library Preparation Kit is optimized for high-efficiency Celemics panels. The Library Preparation Kits include End-repair, A-tailing enzyme mix, index primers (single or dual), adapters and buffers.

LIBRARY PREPARATION WORKFLOW FOR TARGET ENRICHMENT NGS

DNA Fragmentation		
Standard Fragmentation		EP Fragmentation
Option 1. Sonication	Option 2. Fragmentase	Fragmentase
Bead Purification & Quantification		
NGS Library Preparation		
ER/A	ER/A	ER/A
Adapter Ligation (Single/Dual Index)		
Bead Purification		
Index PCR		
Target Enrichment		

Celemics provides two methods for the library preparation step, Standard Library Preparation Kit and Enzymatic Preparation Kit (EP Kit). The Standard Library Preparation Kit includes all reagents for End repair (ER), A-tailing (A), and Adapter Ligation steps. For DNA fragmentation from Standard Library Preparation Kit, customers can use ultra-sonication devices or fragmentase. Fragmentase is provided by Celemics and included in the kit upon request. While the Standard Kit is composed of 4 different steps, the EP Kit includes all steps from enzymatic fragmentation to ER/A in a single reaction enabling convenient workflow. Since the purification step is not needed for EP Kit, the kit allows for minimal DNA loss which is a crucial factor for damaged DNA samples such as FFPE. EP Kit, provided by Celemics, includes all reagents required for library preparation.

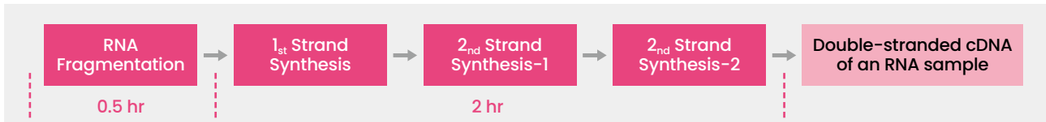
Note.
For Option 1, ultra sonicator is not provided with the kit.
For Option 2, the inclusion of the fragmentase in the kit is optional.

Celemics Double-Stranded cDNA Synthesis Kit

DESCRIPTION

Celemics Double-Stranded cDNA Synthesis Kit is optimized for NGS-based RNA sequencing. The kit includes all components from RNA fragmentation to double-stranded cDNA synthesis for NGS library preparation. The robust performance of the kit allows for the cDNA synthesis even from low amounts of RNA samples with high accuracy and reduced reaction time.

cDNA SYNTHESIS WORKFLOW



Sample amount : 10 ng to 1 µg *
Assay time : 30 minutes for RNA fragmentation and 2 hours for double-stranded cDNA synthesis
* Carrier RNA is required for sample amount < 25 ng

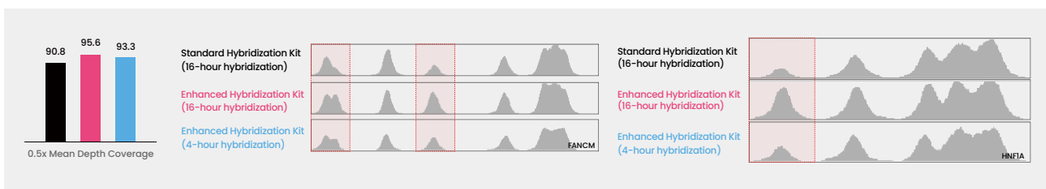
Celemics Hybridization Enhancer

DESCRIPTION

Celemics Hybridization Enhancer is developed for the hybridization step in the library preparation using Celemics Target Enrichment Kits (Enhanced Hybridization Kit). It enables 4 hours of hybridization with no compromise on the performance quality.

PERFORMANCE

Improved uniformity and coverage with Hybridization Enhancer



CeleMag™ Clean-up Bead

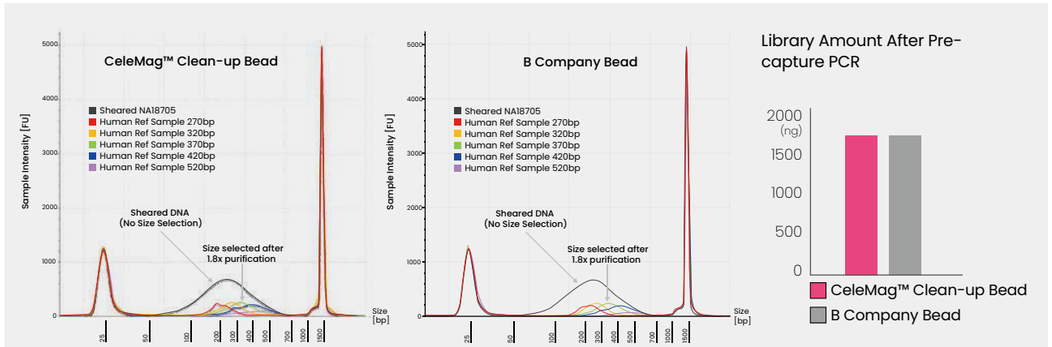
DESCRIPTION

The CeleMag™ Clean-up Bead utilizes unique magnetic bead-based chemistry enabling a simple, flexible and reproducible workflow for purification and size selection of nucleic acids.

KEY FEATURES

1. Market leading purification and size selection efficiency
2. Highly optimized with Celemics Target Enrichment Kits
3. Consistent size selection with flexibility

PERFORMANCE



CeleMag™ Clean-up Bead provides highly comparable performance to competitor product in size selection workflows, achieving consistent DNA size distributions and yielding desired library sizes.
CeleMag™ Clean-up Bead also provides equivalent NGS Library preparation recovery efficiency compared to competitor product.

CLM Polymerase

DESCRIPTION

The role of polymerase is critical in NGS process. Due to the complexity of the library, high performance polymerase is required for high uniformity and yield. As a service provider, Celemics has been providing CLM polymerase with market-leading performance, exhibiting high yield and accuracy with minimized PCR bias.
The product includes all reaction components for PCR. Contact us for more information.

CeleMag™ Streptavidin Bead

DESCRIPTION

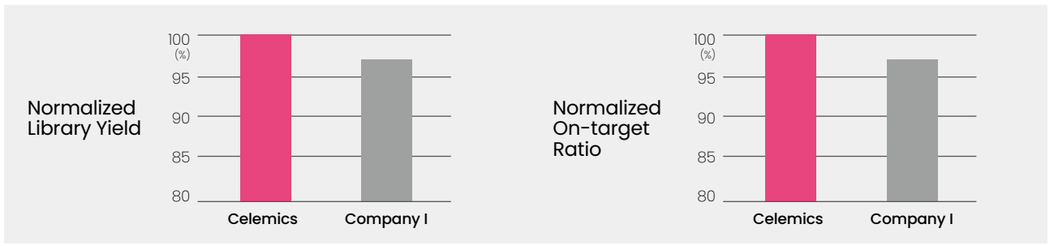
The CeleMag™ Streptavidin Bead selectively isolates biotinylated ligand, using binding properties of biotin. Its high performance enables isolating targeted genes that are bound to probes and minimizes DNA loss during the target enrichment process.

KEY FEATURES

1. High biotin-streptavidin binding capacity
2. Superior target enrichment efficiency

PERFORMANCE

Superior performance of CeleMag™ Streptavidin Bead compared to competitor product



Bioinformatics Software

DESCRIPTION

As a part of Celemics' intellectual property, a unique NGS bioinformatics pipeline is developed to process and analyze massive amounts of genomic data into a readable format with clinically significant biomarkers obtained through Next Generation Sequencing.

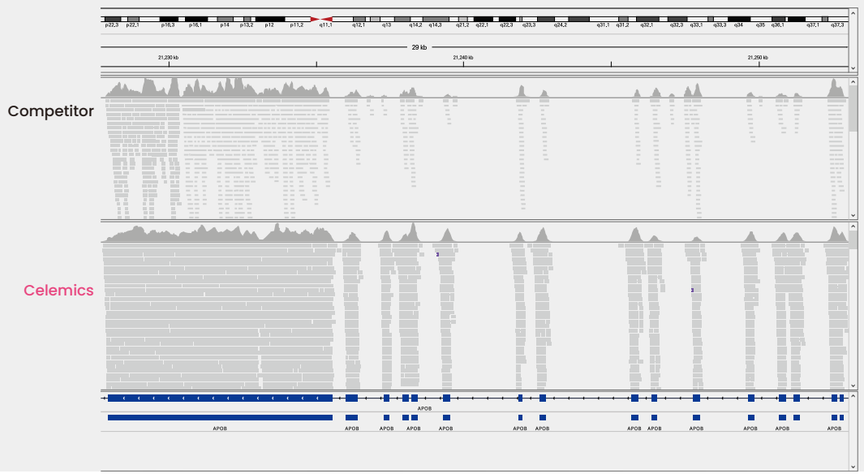
KEY FEATURES

1. Built-in service for all panel kits and services
2. Provides FASTQ to VCF and interpretation
3. Robust pipelines for detecting and analyzing all types of variants including SNV, Indel, CNV, Rearrangements, MSI, TMB, and ultra-low variants

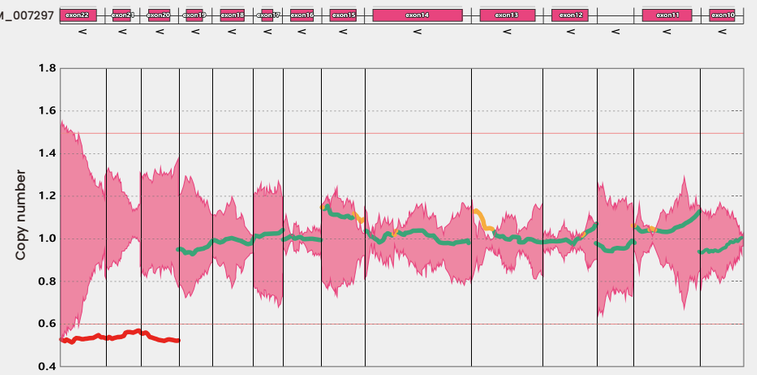
NGS DATA ANALYSIS PIPELINE

EXAMPLES OF BIOINFORMATICS ANALYSIS REPORT

Comparison of IGV results from Celemics and competitor product



CNV Analysis Example – Deletion



Gene rearrangement analysis with FFPE samples