



Simplify workflow with walk-away, end-to-end hybridization capture

Volta's IDT xGen™ v2 Hybridization Capture App offers fully automated hybridization, capture, washes, and PCR setup to deliver high-quality libraries without inter-operator variability. Up to 480 exomes can be processed per run as the App supports plexing up to 20 libraries.

Benefits

- Decrease your sequencing redo rates to less than 3%
- Achieve uniform coverage across high- and low-GC content regions
- Save on probe costs by plexing up to 20 libraries

App specifications

Input: 500 ng to 10 µg of DNA libraries

Output: **Amplification-ready libraries to sequence**

Hands-on time: **30 – 45 minutes**

Callisto processing time: **22 hours**

Throughput: **Flexible, 1 – 24 rxns in a single run**

Multiplexing: **Flexible, 1 – 20 libraries**

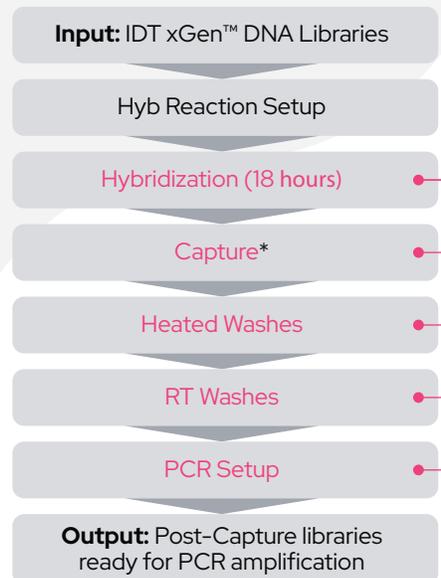
Panel Size: **~8k (Pan-Cancer) to ~400k (Exome) probes**

Chemistry: **IDT xGen™ v2 Hyb Capture**



The Volta Labs Callisto™ Sample Prep System offers an automated, end-to-end solution for complex hybridization capture.

Workflow steps



Walk-away processing on Callisto

*Load Volta consumables

Uniform on-target coverage independent of operator

Callisto delivers high uniformity and on-target rates. This maximizes use of sequencing reads for better coverage of target regions, reducing the need for excessive sequencing depth and lowering overall costs.

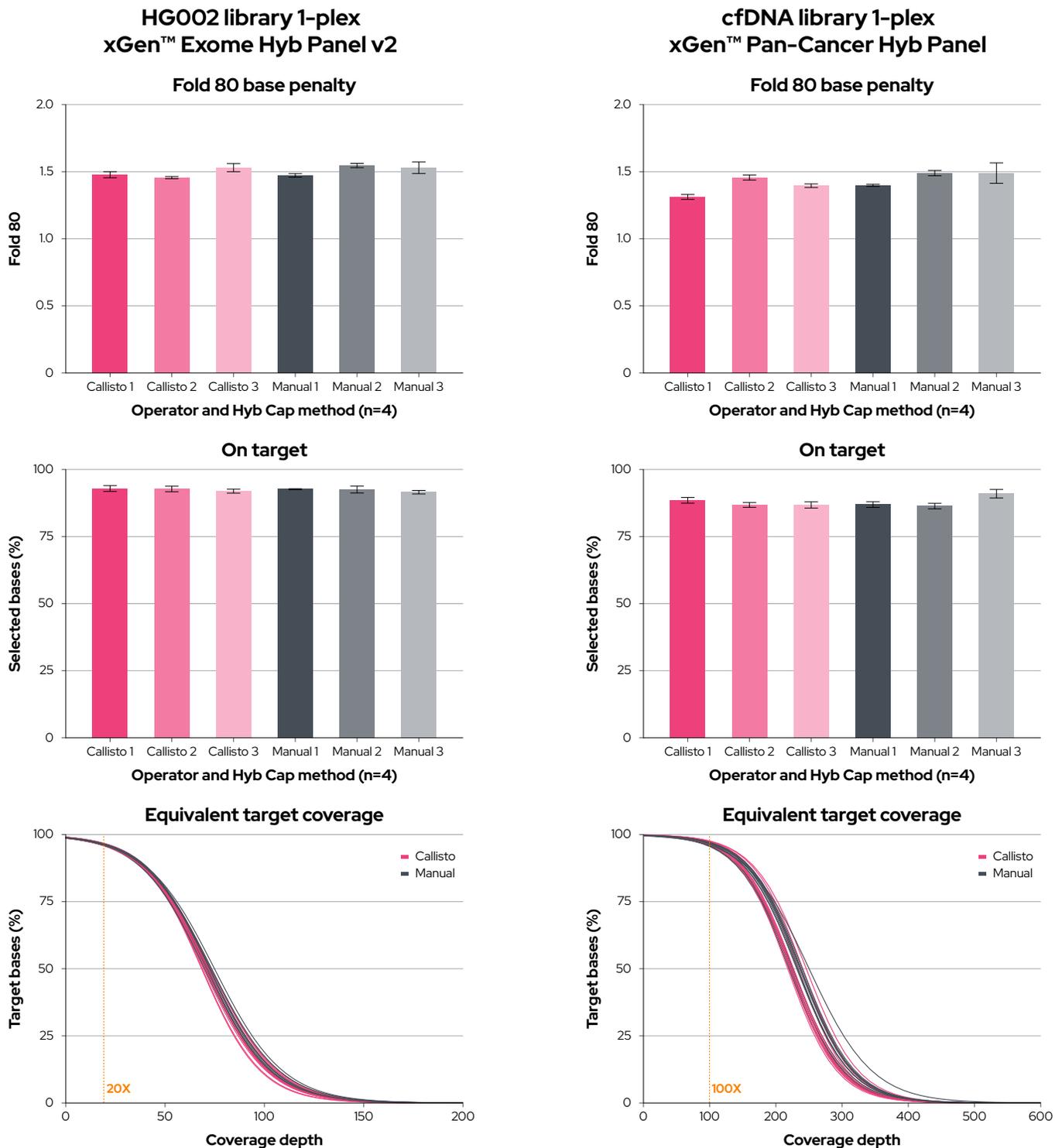


Figure 1. Libraries were manually prepared from 100 ng of HG002 using the xGen™ DNA Lib Prep EZ for the xGen™ Exome Hyb Panel v2 and 20 ng Horizon’s OncoSpan using the xGen™ cfDNA & FFPE DNA Library Prep v2 MC Kit cfDNA for the Pan-Cancer panel. Each user prepared 4 replicates for Callisto and manual workflows.

Plexing with up to 20 libraries without loss in uniformity

HG002 libraries xGen™ Exome v2 Hyb Panel 1-, 8-, 12- and 20-plexes on Callisto compared with 1-plex manual

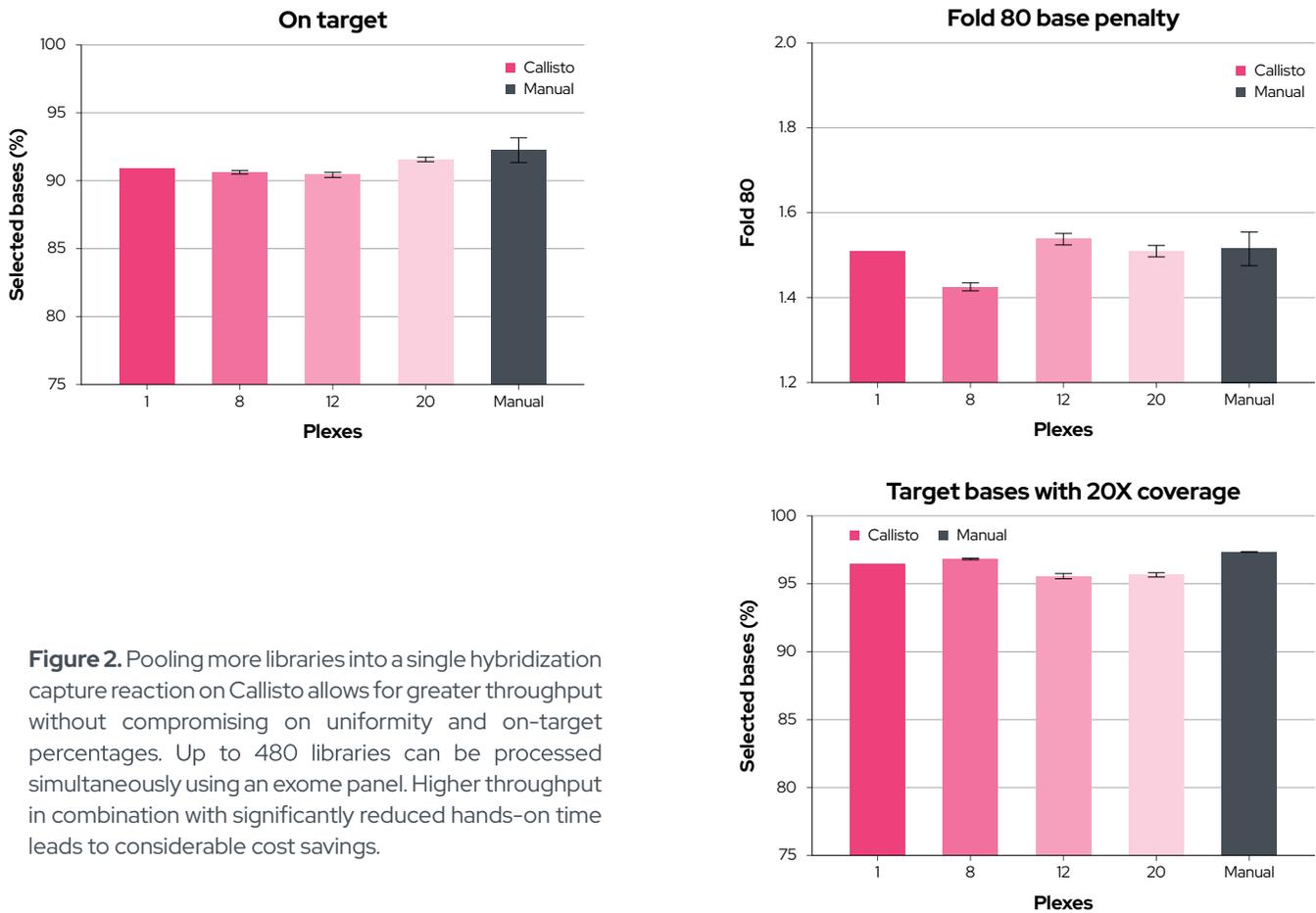


Figure 2. Pooling more libraries into a single hybridization capture reaction on Callisto allows for greater throughput without compromising on uniformity and on-target percentages. Up to 480 libraries can be processed simultaneously using an exome panel. Higher throughput in combination with significantly reduced hands-on time leads to considerable cost savings.

Accurate detection of low-frequency variants with Callisto over manual preps

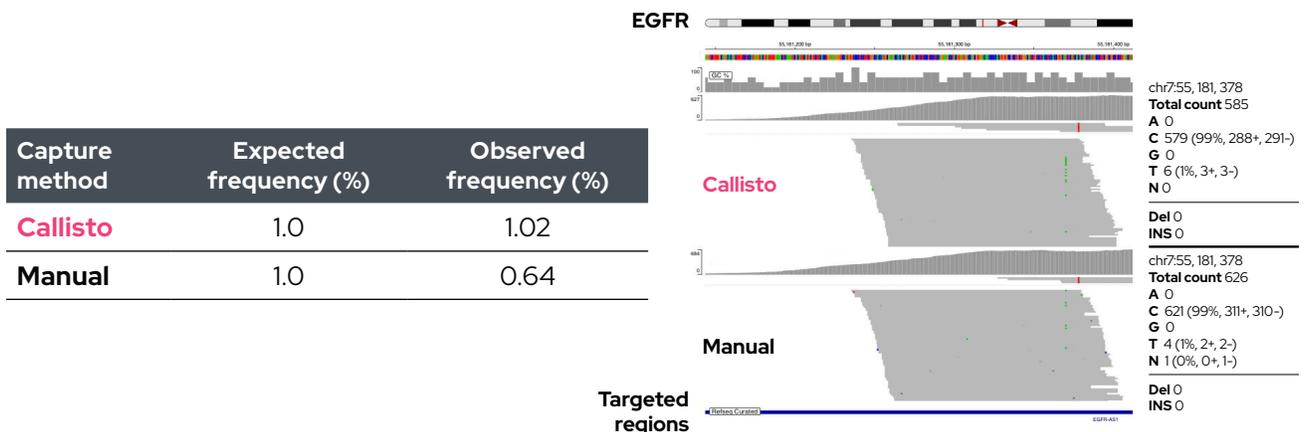


Figure 3. The EGFR rs121434568 C>T SNP occurs at a low expected frequency of 1% in the Horizon cfDNA reference sample. Hybridization capture on Callisto accurately identified the C>T variant at the expected frequency of 1%.

Excellent target coverage for difficult-to-capture regions (RB1 and TERT exon)

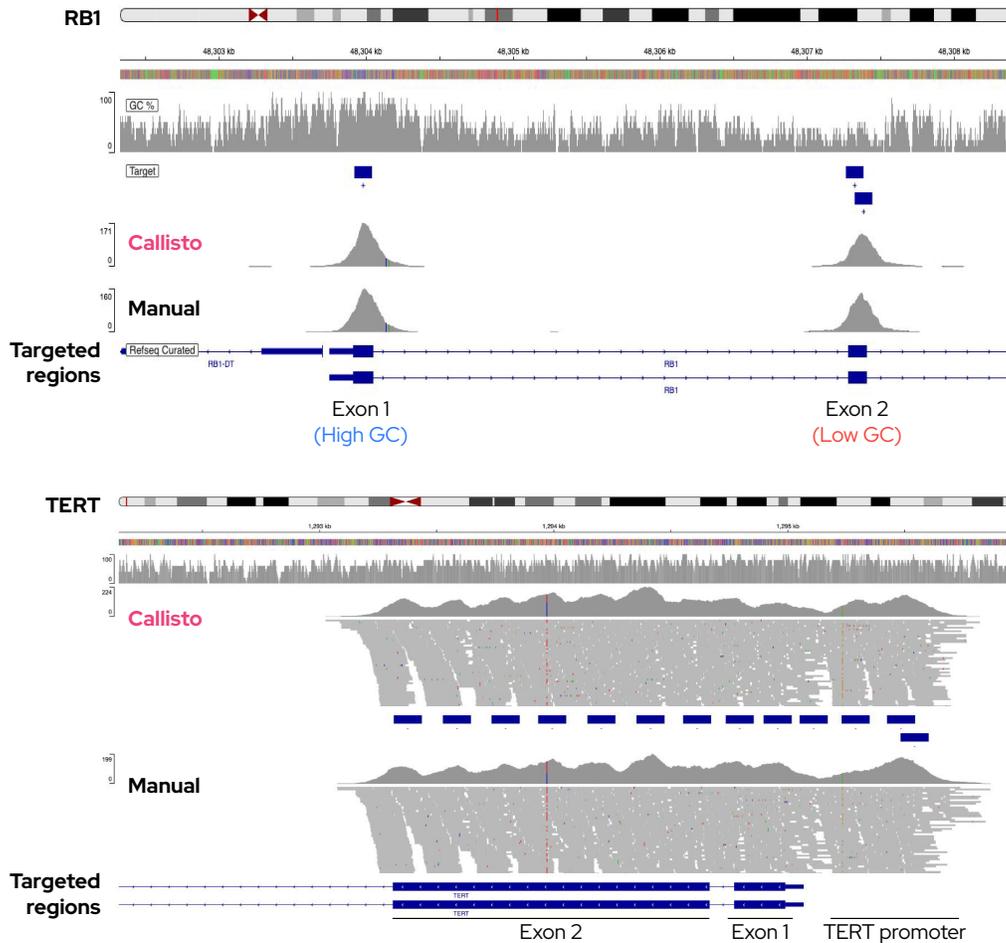


Figure 4. RB1 and TERT are difficult-to-capture cancer-associated genes due to their high-GC content and repetitive sequences. Hybridization capture on Callisto yields higher than 90% on-target percentages with high depth of coverage in these two gene regions of interest, with minimal or no dropouts for both high-GC and low-GC regions.

Ordering information

Part number	Product	Description
C0001	Callisto™ Sample Prep System	Sample prep instrument
HC0001	Callisto Kit for IDT xGen™ v2 Hybridization Capture	Hybridization consumables for 16 reactions - 16 rxns

HC0001 does not include IDT xGen™ reagents or probes, which should be purchased directly from IDT.

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