Finally: Easy and fast hybridization capture targeted sequencing

Accelerate your discoveries with Integrated DNA Technologies' streamlined hybridization capture workflow—engineered for precision and speed.

Reduce complexity with fewer steps and no hot buffer handling—minimize errors and maximize efficiency.

Hybridization times as fast as 1 hour - without losing performance

Go as low as necessary

Supports inputs as low as 100 ng for flexibility across sample types

Get higher conversion rates compared to TA-ligation-based methods, for confident variant detection.

Built for speed and precision

Fast and easy

xGen Hybridization Capture Core Reagents provide reliable targeted sequencing functionality across a range of panel sizes and multiplexing levels. They work with xGen Hyb Panels for a complete, high-quality target enrichment solution. Adding on xGen Pre-hybridization capture Normalase Module saves time and increases throughput—uniform sampling with fewer handling steps to generate balanced library representation for pre-hybridization capture library pooling.

Key Advantages:

- **No hot buffer handling steps** — No need to pre-heat your buffers or keep track of multiple pre-heated plates
- **Reduced hybridization time without reducing performance** – Set up your hybridization for one hour and get from sample to sequencer faster

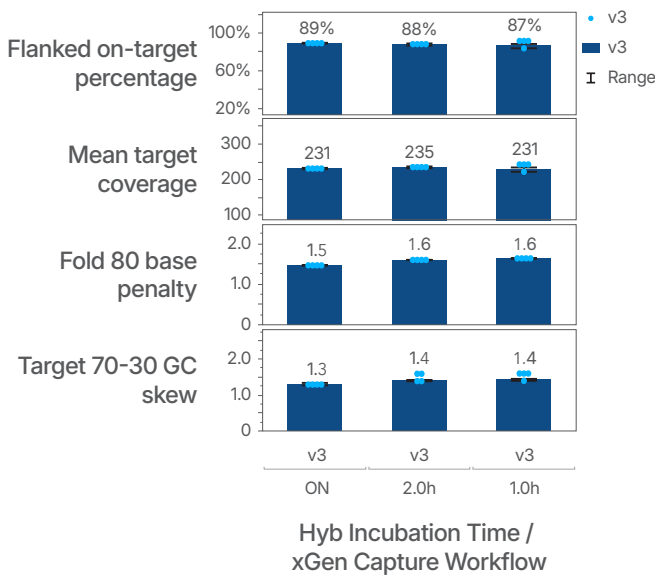

Figure 1. Reduce hybridization capture time and maintain data quality. To evaluate the performance of the new buffer system in xGen Hybridization and Wash Buffer v3, we set up a series of experiments to assess hybridization time. The DNA libraries were prepared using xGen DNA EZ Library Prep kit with 25 ng Coriell gDNA NA12878. The DNA libraries were subsequently enriched using 400 ng of input with xGen Exome Hyb Panel v2 for either overnight (ON), 2 hours, or 1 hour. Captured libraries were sequenced on a NextSeq 2000 system (Illumina®) and subsampled to 50 M total reads per sample. A standard analysis pipeline was run to produce Picard metrics. The flanked-on target percentage and fold 80 base penalty was consistent between hybridization incubation times. A slight variation in the GC skew metric was observed between the different hybridization incubation times using the xGen Exome Hyb Panel v2.

High coverage of degraded samples

The xGen cfDNA & FFPE DNA Library Preparation Kit empowers you with highly complex variant identification from degraded and low-input research samples.

- Get high conversion rates compared to TA-ligation-based methods with novel ligase and highly modified adapters.
- Identify variants at ≤1% variant allele frequency (VAF).

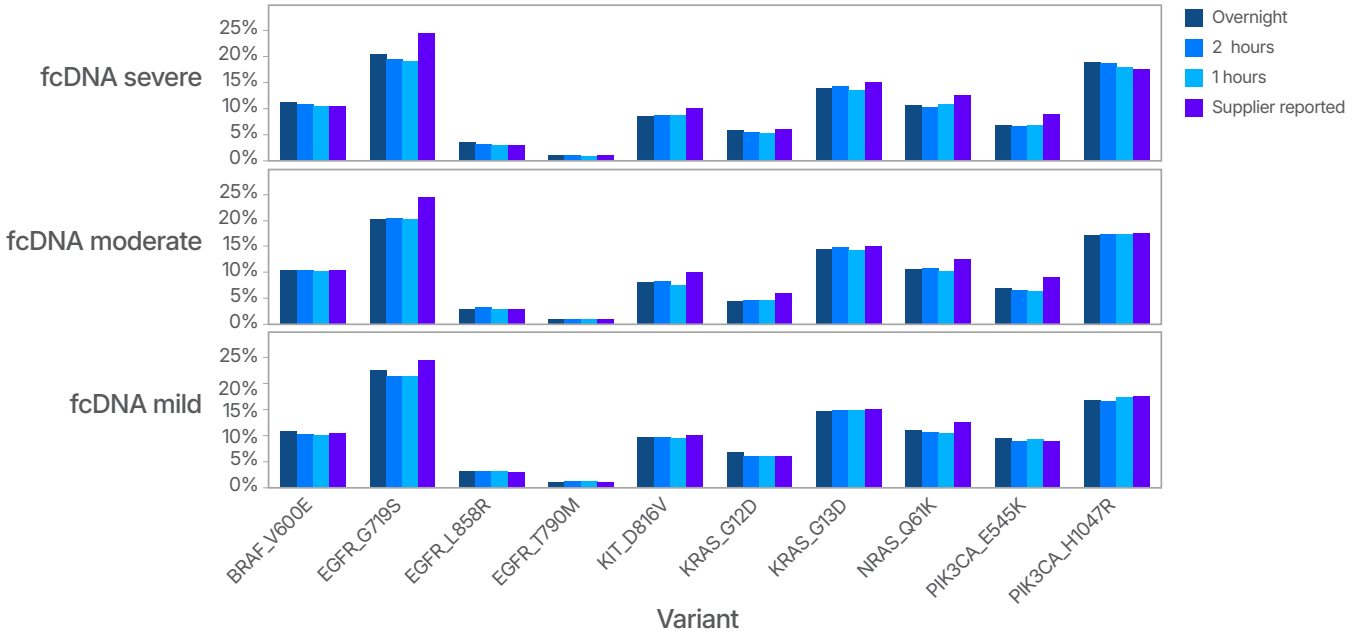

Figure 2. Impact of hybridization time on SNV detection in degraded samples. Three commercially available samples with known SNVs at measured frequencies, and with differing degrees of DNA damage (as measured by DIN score), were used as test library prep input. One hundred nanograms of DNA from each sample was used with the xGen cfDNA & FFPE DNA Library Prep Kit following IDT's published protocol. Each sample was prepared in quadruplicate. Five hundred nanograms of library were used in a singleplex capture for various hybridization durations (overnight, 2 hours, and 1 hour). Samples were sequenced to approximately 100 M total reads and analyzed, to create ssConsensus data that was interpreted by VARDICT. The measured allele frequency for each of the known SNVs is indicated for different hybridization times. The following samples were used: Horizon discovery standards - HD803 (fcDNA severe), HD799 (fcDNA moderate), and HD798 (fcDNA mild).

Ordering information

Product	Size	Catalog #
xGen Hybridization and Wash Kit v3		
xGen Hybridization and Wash Reagents v3	16	10028311
	96	10028312
xGen Hybridization and Wash Beads v3	16	10025272
	96	10025273
Library Prep and xGen Pre-hybridization capture Normalase Module		
xGen cfDNA & FFPE DNA Library Prep v2 MC Kit	16	10010206
	96	10010207
xGen Pre-Hyb Normalase Module 96rxn	96	10017913
xGen UDI Primers 16 rxn	Index 1-16	10005975
xGen UDI Primer Plate 1, 8nt	Index 1-96	10005922
Custom Indexing options	Up to 1536 Indexes	applicationsupport@idtdna.com

For more information, visit **idtdna.com/fasthyb**