

xGen® Lockdown® Probes

High quality probes that deliver best-in-class performance for targeted sequencing

Experience complete flexibility for target capture panel design

xGen Lockdown Probes are individually synthesized, 5'-biotinylated, 120mer DNA probes used for target enrichment in NGS studies. Compared to array-synthesized and other suppliers' probes, xGen Lockdown Probes have been shown to exhibit better uniformity and less GC bias, allowing you to sequence deeper with fewer overall reads. Probes can be delivered in separate plate wells or combined in a tube, providing the option to test different probe combinations in your panels. Custom probe panels can be easily designed using our Target Capture Probe Design and Ordering Tool. For convenience, predesigned xGen Lockdown Panels and Gene Capture Pools are also available.

benefits

Achieve improved, consistent target capture from individually synthesized and quality controlled probes.

Customize or expand existing capture panels cost-effectively by adding supplemental probes.

Enjoy quick turnaround times for custom panels, delivered in as few as 7 business days.

Discover more at
www.idtdna.com/xGen

Achieve consistently deep, uniform coverage

Capture panels created with xGen Lockdown Probes provide deep, uniform coverage of the targeted regions (Figure 1A), because all probes are present at equimolar concentrations. Individual synthesis of xGen Lockdown Probes also delivers reliable batch-to-batch performance (Figure 1B).

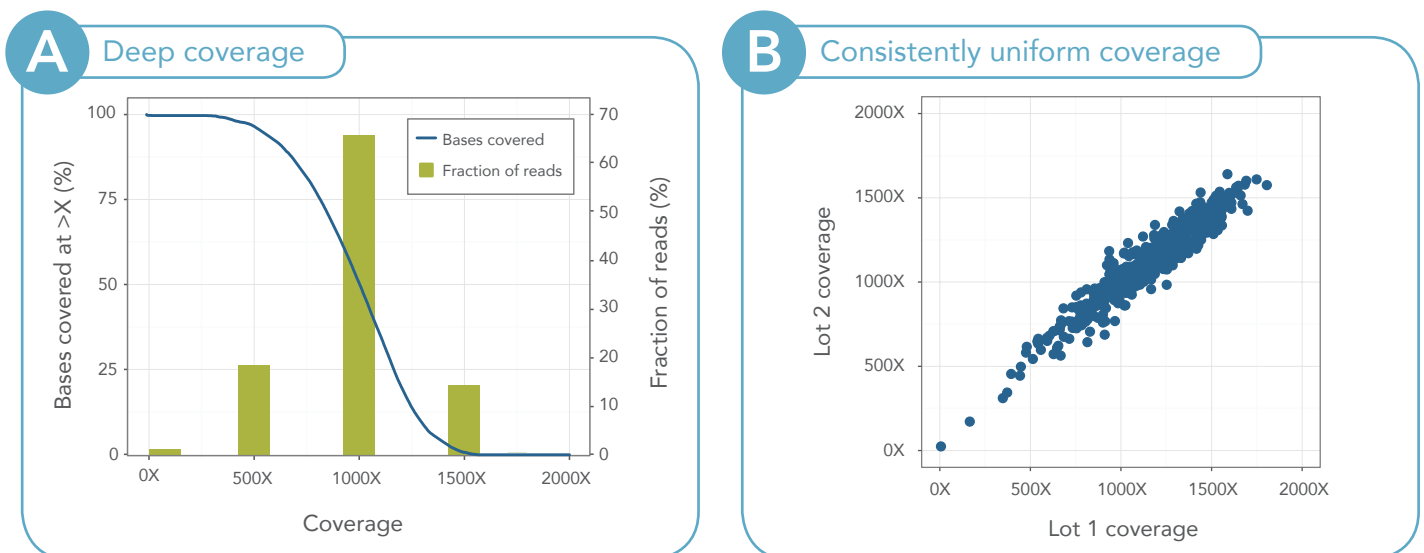


Figure 1. Consistently deep, uniform sequence coverage with xGen® Lockdown® Probes. A DNA library created from human genomic DNA (Coriell) was enriched for a 111 kb target region, using a capture panel created from xGen Lockdown Probes. The enriched libraries were sequenced on an Illumina NextSeq® instrument and subsampled to 2 million reads. The data show (A) deep, uniform coverage and (B) consistent median target coverage for two synthesis lots of 1,174 probes ($R^2 = 0.915$). Coverage and target depth were calculated with Picard and BEDTools, respectively.

Expand the range of your existing target capture panels

The flexibility afforded by individual synthesis allows ordering of specific xGen Lockdown Probes for supplementing existing target capture panels. Supplementary xGen Lockdown Probes can be used to rescue regions that are poorly captured by existing panels; e.g., first exons and GC rich regions. xGen Lockdown Probes can also be used to extend the target range of predesigned or custom capture panels (Figure 2), allowing a core panel to be used for various sequencing applications.

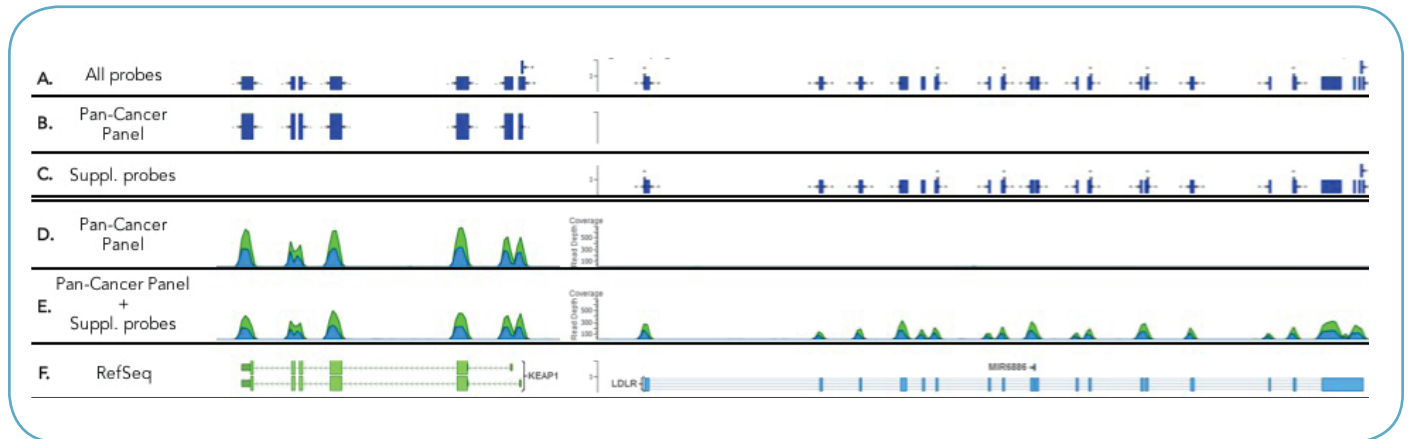


Figure 2. Extended target capture range using xGen® Lockdown® Probes. Five enriched libraries were prepared from Coriell NA12878 or NA18787 genomic DNA, using the xGen Pan-Cancer Panel (7837 probes targeting 128 genes and 50 SNPs covering an 800 kb region). A modified panel was created by supplementing the Pan-Cancer Panel with 103 xGen Lockdown Probes targeting three additional genes (46 exons, 10.5 kb). Eight enriched libraries were prepared from human gDNA extracted from saliva, using the supplemented panel. The data show coverage of the original xGen Pan-Cancer Panel (B,D), additional probes only (C), and the supplemented Pan-Cancer Panel (A,E). Corresponding RefSeq locations are shown (F). The supplementary xGen Lockdown Probes provided further sequencing data without affecting the data integrity of the original panel.

Ordering information

Product	Size	Catalog #
xGen® Lockdown® Probes	Mini (1 reaction per probe)	www.idtdna.com/xGen
	Standard (8 reactions per probe)	
	XL (64 reactions per probe)	

Related products

xGen® Universal Blockers—TS Mix	16 reactions	1075474
	96 reactions	1075475
	4 x 96 reactions	1075476
xGen® Lockdown® Reagents	16 reactions	1072280
	96 reactions	1072281

www.idtdna.com/LockdownProbes

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