

# xGen™ Custom Hyb Panels

Custom Hyb Panels deliver reliable research results for targeted next generation sequencing



NGS Functional Test Report ensures a working panel when you receive it



Customize or expand existing capture panels to be cost effective by adding supplemental probes



Expect fast turnaround times for custom panels, so you can get to work quickly

## Experience complete flexibility for target capture panel design

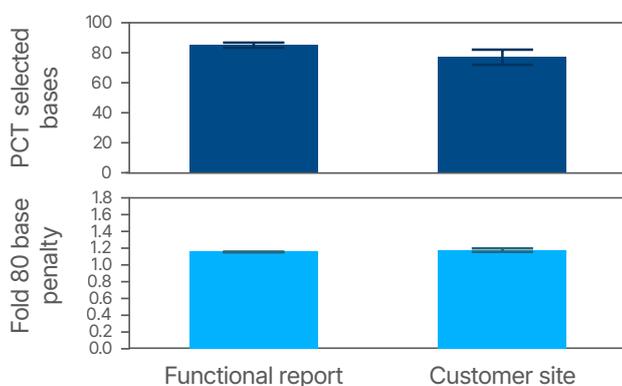
xGen™ Custom Hyb Panels are made of high-fidelity, individually synthesized, 5'-biotinylated oligos for targeted NGS. Proprietary DNA synthesis technology provides rapid, quality panels that can be optimized, expanded, and combined with other panels. The reliable custom panel design pipeline and experienced consultation at IDT enable you to capture more regions with maximal coverage.

## Benefits

- Panel with an NGS Functional Test Report delivered in three weeks
- Affordable options available for any size panel
- Make custom panel designs using xGen Hyb Panel Design Tool
- Options for customized delivery
  - xGen Custom Hyb Panel–Accel available in as little as 5 business days
  - xGen Custom Hyb Panel–Production provides additional quality documentation
  - xGen Custom Hyb Panel–Production (No functional testing) Individual oligo QC via ESI-MS

## Start projects faster with a panel that works out of the box

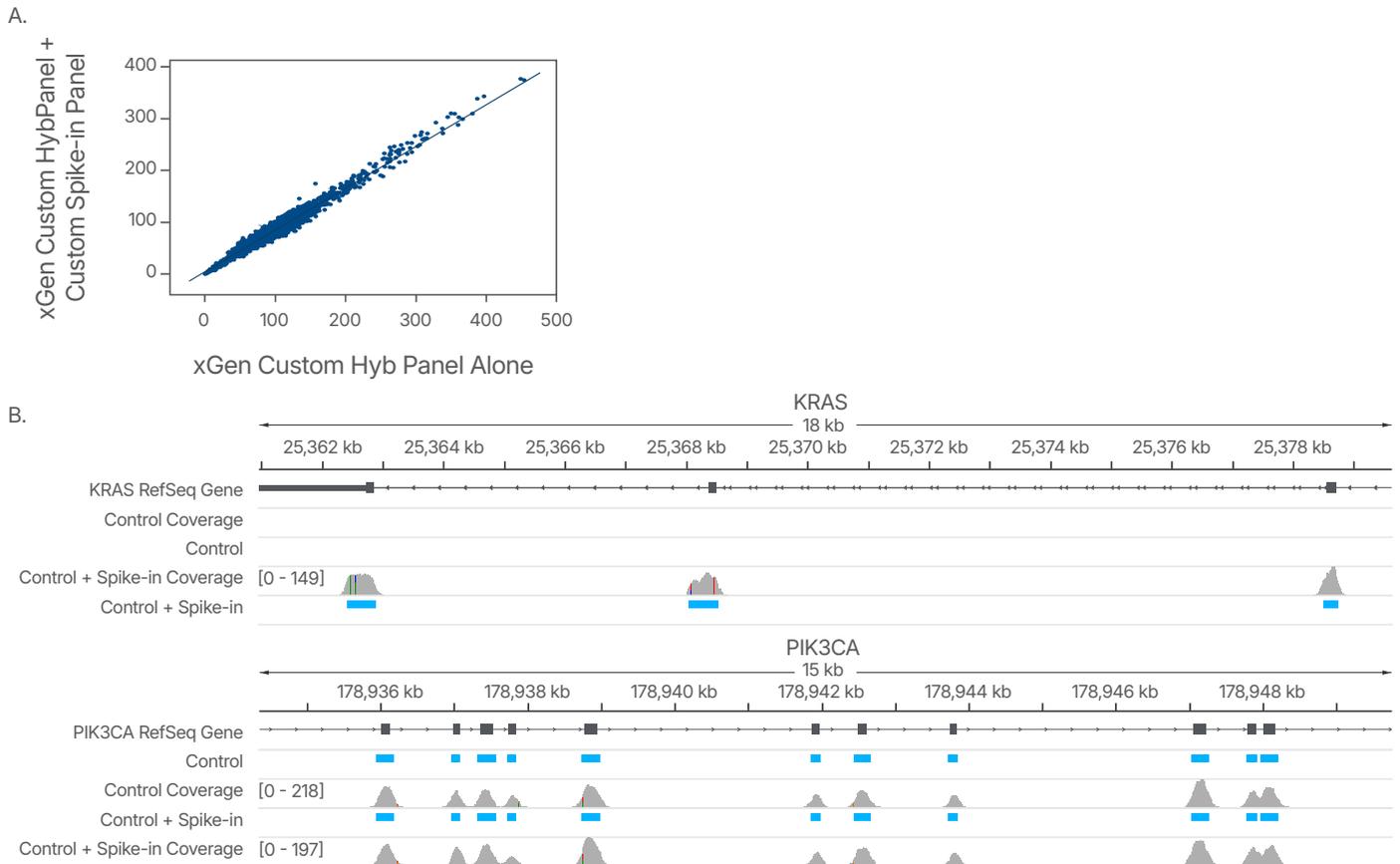
xGen Custom Hyb Panels are NGS functionally tested ensuring a functioning panel when you receive it. An NGS Functional Test Report that is delivered with the panel offers additional confidence in panel function so you can get started on your projects faster. The xGen™ Hyb Panel Design Tool is an easy-to-use platform that generates custom panel designs for multiple genomes with custom tiling options. Fast, experienced consultation is also available from our experienced NGS Design Team.



**Figure 1. xGen Custom Hyb Panels are functionally tested prior to delivery.** 100 ng of two (2) human genomic DNA samples (Coriell NA12878 and NA24385) was used to prepare NGS libraries. 500 ng of these libraries (n = 5) were manually captured in triplicate, on one (1) day with a custom lung cancer panel (208 kb). Data from this experiment were used to generate a functional NGS report (left) The same custom lung cancer panel was then captured by the customer on a Biomek i7 (n = 14, right). NGS functional data is pulled from Picard HS Metrics. All samples achieved 100X coverage or deeper.

## Expand the range of your existing target capture panels

The flexibility afforded by individual synthesis allows you to order specific xGen Custom Hyb Probes for supplementing existing hyb panels. Supplementary xGen Custom Hyb Probes can be added to rescue regions that are poorly captured by existing panels, or to extend the target range of predesigned or custom capture panels (**Figure 2**), enabling a core panel to be leveraged on multiple sequencing applications.



**Figure 2. xGen Custom Hyb Panels are customizable.** xGen Custom Hyb Probes can be added to target regions of interest to customize an existing hyb panel. Libraries were prepared from one (1) human genomic DNA (Coriell NA12878) using the xGen cfDNA and FFPE Library Prep Kit and captured, in triplicate, on one (1) day using either an xGen Custom Hyb Panel (5001 probes targeting 33 genes, covering a 600 kb region) or xGen Custom Hyb Probes targeting 32 additional genes (89 kb) spiked into the xGen Custom Hyb Panel for capture. **(A)** Coverage of xGen Custom Hyb Panel, plotted as a mean of triplicates, with and without the spike-in of xGen Custom Hyb Probes, shows that adding additional probes does not impact coverage of the main panel. **(B)** Representative IGV screenshots are shown for PIK3CA (targeted in xGen Custom Hyb Panel) and KRAS (additional content from spike-in xGen Custom Hyb Probes). Probe regions are indicated in light blue.

**Note:** The xGen Custom Hyb Panels replace IDT’s legacy NGS Discovery Pools, xGen Predesigned Gene Capture Pools, and xGen Lockdown Probe Pools. This singular custom panel is a streamlined optimal panel solution for any sized project that provides an NGS Functional Report so that you can get started on your projects faster without sacrificing results.

## Ordering Information

Product	Size
xGen Custom Hyb Panels	16 rxn, 96 rxn
xGen Custom Hyb Panel–Accel	16 rxn, 96 rxn
xGen Custom Hyb Panel–Production	16 rxn, 96 rxn
xGen Custom Hyb Panels–Production (No functional testing)	16 rxn, 96 rxn

For information about pricing, or to get a quote, please contact IDT Sales

For more information, visit [www.idtdna.com/CustomHybCap](http://www.idtdna.com/CustomHybCap)



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