



## SeqCap EZ Designs - Comprehensive Cancer Design

*Discover more, sequence less - in your cancer research*



**NEW!**

### NEW! SeqCap EZ Reagent Kit

Maximize your convenience; order all the enrichment reagents you need in one kit.

Research has revealed genetic mutations are involved in the regulation of cellular growth and progression of cancers. Pinpointing the exact mutations responsible for these cancers has been difficult as the heterogeneous and complex makeup of genetic mutations reveal a variety of genotypes.

This design is a target enrichment sample preparation tool developed for the sequencing of genes implicated in cancers. This design was created using information from the Cancer Gene Census (Sanger) and NCBI Gene Tests and enables the detection of mutations in genes involved in common and rare cancers. Capitalizing on our industry leading performance<sup>1</sup> you can now apply our sequence capture technology to your cancer research.

- **Trust the most comprehensive oncology enrichment design** to enhance your variant discovery and detection.
- **Optimize throughput and sequencing coverage** with sample multiplexing.<sup>1</sup>
- **Minimize sequencing costs** with the superior capture efficiency of our 2.1M overlapping probes.<sup>1</sup>

#### SeqCap EZ Comprehensive Cancer Design

<b>Target Size</b>	4 Mb
<b>Genes</b>	578 Cancer Genes
<b>Databases</b>	Cancer Gene Census (Sanger), NCBI Gene Tests

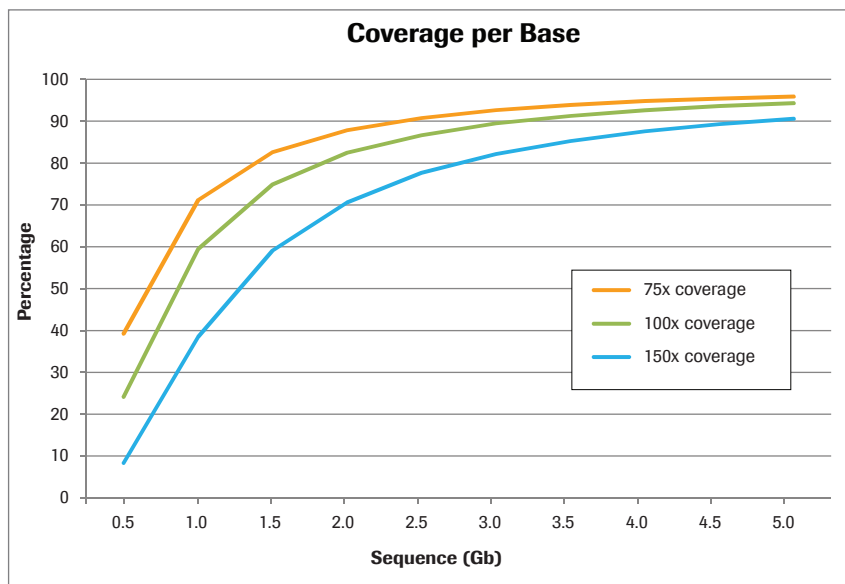
**For life science research only.  
Not for use in diagnostic procedures.**

<sup>1</sup> Clark M, *et al.* Performance comparison of exome DNA sequencing technologies. *Nat. Biotech.* 2011 Sep 25;29(10):908-14; doi:10.1038/nbt.1975

## Performance Data

Figure 1 shows the percent of target bases covered at specific coverage depths as the total amount of sequencing increases. On a per sample basis only 4.5 Gb sequencing is needed to obtain 150x coverage for 90% of targeted bases. Extensively less sequencing is needed to obtain 75x and 100x coverage over

90% of targeted bases. As shown in Table 1, you can minimize sequencing costs through efficient multiplexing. Using an Illumina HiSeq or MiSeq instrument, multiple samples per lane are possible depending on the coverage depth required.



▲ **Figure 1: Coverage per base comparison across three sequencing depths.** The SeqCap EZ-Comprehensive Cancer Design was sequenced using Illumina 2x76 bp reads, subsampled to calculate gigabases of sequencing needed per sample for 75x, 100x and 150x coverage depths.

### Sample Multiplex Capabilities

Coverage	Illumina HiSeq (34 Gb*)	Illumina MiSeq (4 Gb*)
<b>75x</b>	14 samples	2 samples
<b>100x</b>	12 samples	1 sample
<b>150x</b>	7 samples	-

\*Estimates for sequencing throughput per lane are based on manufacturer's specifications.

▲ **Table 1: Sample throughput multiplexing.** This example illustrates the 75x, 100x, and 150x coverage rates with 90% bases covered using Illumina 2x76 bp reads on either a HiSeq or MiSeq instrument. Sample multiplexing estimates derived from coverage model in Figure 1.

### SeqCap EZ Library

Product	Cat. No.	Pack Size
<b>Comprehensive Cancer Design*</b>	06 740 251 001	4 reactions
Product Name: SeqCap EZ Choice Library	06 266 282 001	12 reactions
Reference #: 4000007080		
Design Name: 120522_HG19_Onco_R_EZ	06 266 304 001	24 reactions
	06 266 312 001	48 reactions
	06 266 339 001	96 reactions
	06 266 347 001	384 reactions
	06 266 355 001	960 reactions

\* SeqCap EZ Designs are featured online at [www.nimblegen.com/ezdesigns](http://www.nimblegen.com/ezdesigns). These designs offer specific panels for focused research, including a Neurology Panel, Comprehensive Cancer Panel, Human UTRs, Mouse Exome and more.

### Kits and Reagents

Product	Cat. No.	Pack Size
<b>NEW</b> SeqCap EZ Reagent Kit	06 953 212 001	24 reactions
Includes SeqCap EZ HE-Oligo Kit A, SeqCap EZ Accessory Kit, SeqCap EZ Hybridization and Wash Kit		
<b>NEW</b> SeqCap EZ HE-Oligo Kit A	06 777 287 001	96 reactions
<b>NEW</b> SeqCap EZ HE-Oligo Kit B	06 777 317 001	96 reactions
<b>NEW</b> SeqCap EZ Accessory Kit	06 776 302 001	24 reactions
	06 776 345 001	96 reactions
SeqCap EZ Hybridization and Wash Kit	05 634 261 001	24 reactions
	05 634 253 001	96 reactions

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