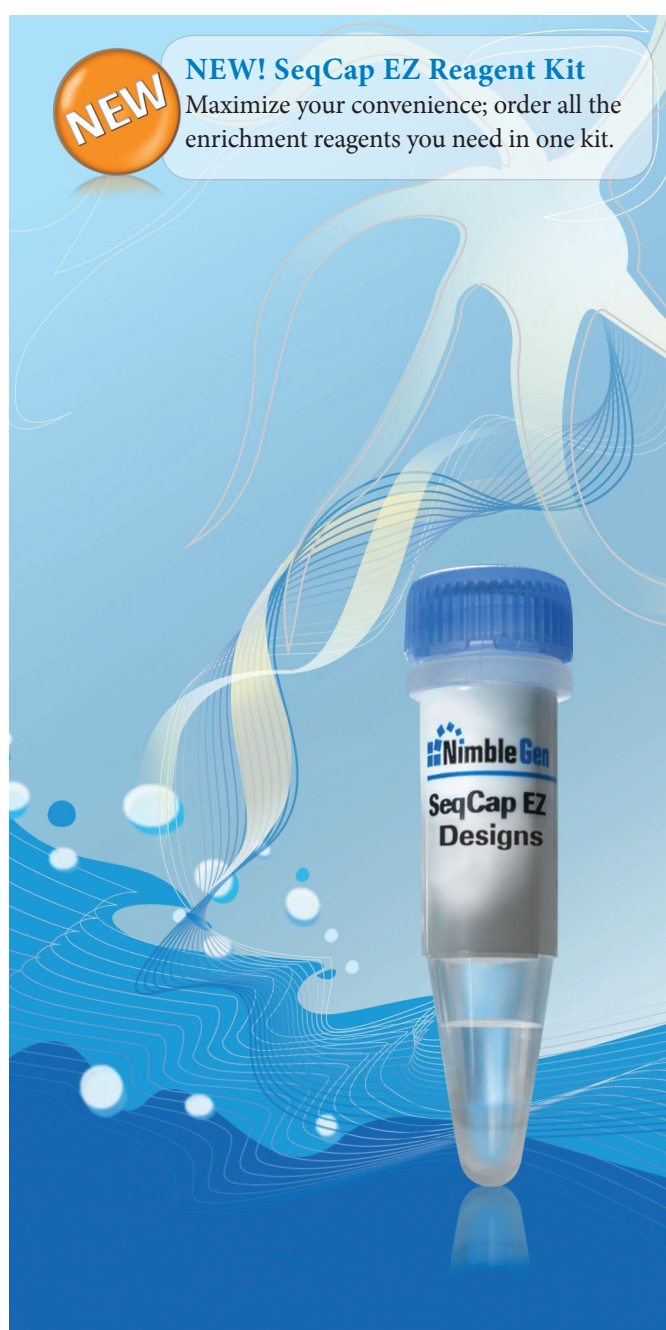


SeqCap EZ Designs - Neurology Panel Design

Discover more, sequence less in your neurological research



Research has associated genetic variants with a wide variety of neurological diseases and disorders including Parkinson's disease, Alzheimer's disease, epilepsy, autism, and schizophrenia. Pinpointing the exact mutations responsible for these disorders 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 neurological diseases. This gene panel was developed using information from National Institute of Neurological Disorders and Stroke (NINDS/NIH) and NCBI Gene Tests. Capitalizing on our industry leading performance¹ you can now apply our sequence capture technology to your neurology research.

- **Trust the most comprehensive neurology panel** to discover novel and known mutations associated with 87 neurological disorders.
- **Optimize throughput and sequencing coverage** with sample multiplexing.¹
- **Minimize sequencing costs** with the superior capture efficiency of our 2.1M overlapping probes.¹

SeqCap EZ Neurology Panel Design

Target Size	1.5 Mb
Genes	256 Genes
Diseases	87 Neurological Diseases & Disorders
Databases	National Institute of Neurological Disorders and Stroke (NINDS/NIH) NCBI Gene Tests

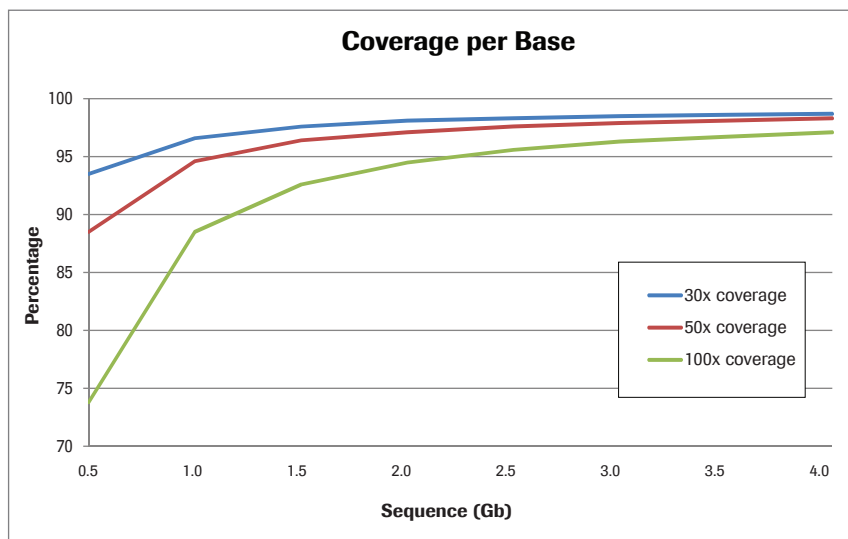
**For life science research only.
Not for use in diagnostic procedures.**

¹ 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 2.5 Gb sequencing is needed to obtain at least 100x coverage for 95% of targeted base. Extensively less sequencing is needed to obtain 30x and 50x

coverage over 95% 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.



Sample Multiplex Capabilities		
Coverage	Illumina HiSeq (34 Gb*)	Illumina MiSeq (4 Gb*)
30x	36 samples	5 samples
50x	34 samples	4 samples
100x	14 samples	2 samples

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

▲ **Table 1: Sample throughput multiplexing.** This example illustrates the 30x, 50x, and 100x coverage rates with 95% bases covered using Illumina 2x76 bp reads on either a HiSeq or MiSeq instrument. Sample multiplexing estimates derived from coverage model in Figure 1.

▲ **Figure 1: Coverage per base comparison across three sequencing depths.**

The SeqCap EZ-Neurology Panel Design was sequenced using Illumina 2x76 bp reads, subsampled to calculate gigabases of sequencing needed per sample for 30x, 50x and 100x coverage depths.

SeqCap EZ Library

Product	Cat. No.	Pack Size
Neurology Panel Design*	06 740 251 001	4 reactions
Product Name: SeqCap EZ Choice Library	06 266 282 001	12 reactions
Reference #: 4000007090		
Design Name: 120522_HG19_Neuro_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. 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
NEW 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		
NEW SeqCap EZ HE-Oligo Kit A	06 777 287 001	96 reactions
NEW SeqCap EZ HE-Oligo Kit B	06 777 317 001	96 reactions
NEW 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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