

# Agilent NGS Design Testing Service

Save time and get your projects started faster

Designing and testing a custom next-generation sequencing (NGS) panel can be time- and resource-intensive. Get your custom SureSelect NGS target enrichment panels made faster, easier, and with fewer headaches using the Agilent Design Testing Service (DTS).

## How it Works

Agilent Design Experts will work with you to identify your specific requirements and genomic targets of interest and use those to create a custom SureSelect panel tailored to your exact specifications. After its creation, the Agilent NGS Testing Lab (located in Santa Clara, CA) will perform wet lab testing using HapMap reference samples. Once the panel performance is reviewed and approved by you, a 16 reaction kit is shipped to you and you can start your research!

## See the Advantages

### Peace of mind

Your custom panel will be created by an experienced Agilent Design Expert with in-depth knowledge of target enrichment methodologies and access to the latest probe design software tools. Your design will also be protected by Agilent and only your lab and the Agilent design team will have access to it.

After its creation, our team will test your custom design by capturing duplicate libraries prepared with either overnight or 90-min library prep and target enrichment reagents. Additionally, one library will be captured with our ClearSeq Comprehensive Cancer panel as a process control.

Following sequencing of the libraries, you will be provided with the FastQ raw sequencing data and SureCall quality control metrics to assess the performance of your design. If you are not satisfied, the Agilent design expert will reoptimize your design—and your new panel can be ordered.

### Shorten the time for design testing

By leveraging the expertise of our Agilent design experts, you can go from design testing to validation and implementation in as little as six weeks\* (Figure 1), helping you get your research going quicker and easier.

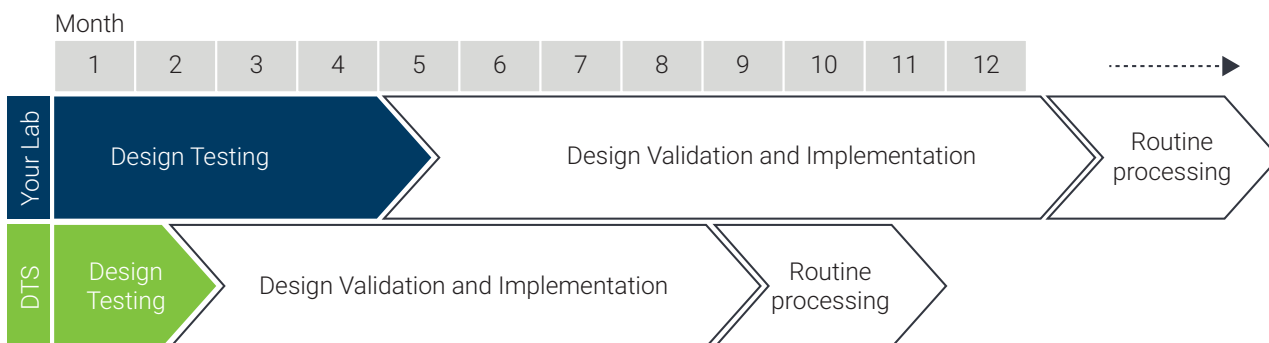
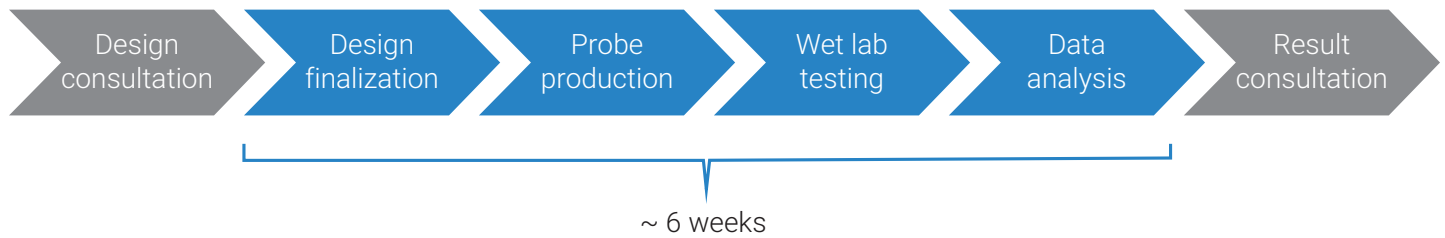


Figure 1. Timeline comparison of in-house design verification versus Agilent DVS.

\* 6 weeks turnaround time starting from design finalization to completion of data analysis

## Design Testing Service Workflow



	Design Consultation	Custom Finalization	Probe Production	Wet Lab Testing	Data Analysis	Result Consultation
Major activities	Upfront customer consultation - Define design targets, hybridization mode and other requirements - Align on expectations	Custom SureSelect design by Agilent Design Expert Design finalization Customer sign-off on design	Customer places DTS order Probes produced and shipped to Agilent NGS Testing Lab 16 reaction kit of probe shipped to customer	Library preparation of Hapmap samples using reagents compatible with downstream enrichment workflow Enrichment of duplicate libraries with the custom panel and one library of process control Sequencing to 100X on Illumina MiSeq, HiSeq or NextSeq	Data QC and analysis - Duplicate Rate - Number of reads - On target rate - Coverage	Review data with customer - FastQ/BAM file - SureCall QC report DTS completed - If not satisfied, Agilent Design Experts will rebalance your design for additional optimization. Wet lab testing not included.

### Deliverables

The final deliverables include FastQ raw data and/or BAM files as well as SureCall QC report, which summarizes the key sequencing metrics (e.g., number of reads in the BAM file, duplication rate, number of reads in covered regions (on-target rate), and coverage of target bases).

### Ordering Information

Design Size	Part Number
Tier 1 (1-499 kb)	G9510A
Tier 2 (0.5-2.99 Mb)	G9510B
Tier 3 (3-5.99 Mb)	G9510C
Tier 4 (6-11.99 Mb)	G9510D
Tier 5 (12-24 Mb)	G9510E
Tier L (>24 Mb)	G9510F

### Learn more:

Contact your local Agilent Sales Representative or email us at [NGS\\_DTS@agilent.com](mailto:NGS_DTS@agilent.com)

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### Conclusion

#### Focus on your NGS insights – leave the design and testing to us

The Agilent NGS Design Testing Service helps you create and test a custom SureSelect panel based upon your specific requirements and targets of interest in just 6 weeks. The service includes design, wet lab testing on reference samples, and a performance data review. Combined, this significantly accelerates the time from design to implementation of your custom NGS panels and helps you get to your results faster.