
# Target Enrichment for 454 Sequencing...Made Surely Better

## Agilent SureSelect Target Enrichment System

The leading target enrichment platform is now optimized and validated for all major second-generation sequencing platforms. Precisely direct your search for genetic variants with the Agilent SureSelect Target Enrichment System for 454 Sequencing. With protocols that are fast and easy to use, you receive superior on-target performance and read-depth uniformity.

Address your specific requirements with a variety of products optimized for 454 Sequencing systems. Enrich for the human exome or kinome with our off-the-shelf kits — or develop your own custom capture product with eArray, which allows you to easily design your own targets from <200 Kb up to 6.8 Mb. Our state-of-the-art, high-fidelity SurePrint long oligo printing facility delivers your order quickly so you can get your research moving faster than with other target enrichment products.

- *Fully validated and compatible with 454 GS FLX Titanium and GS Junior sequencers*
- *5-10 times less DNA required than for other protocols*
- *Fast, 24-hour hybridization*

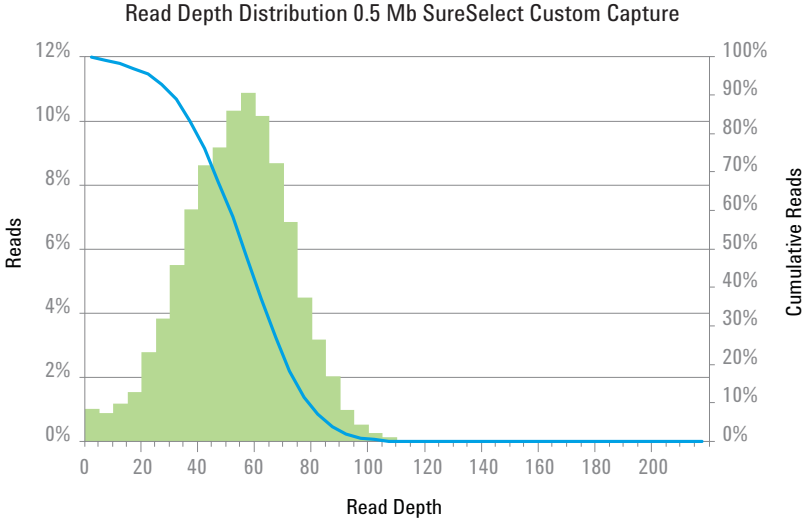
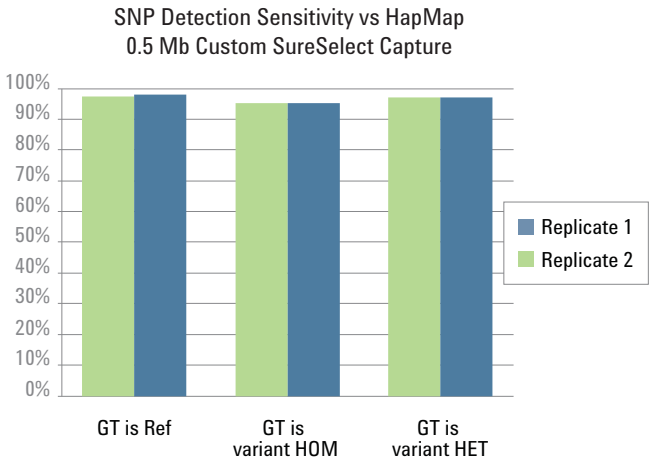



*Figure 1. Read-depth distribution plot for DNA enriched with a SureSelect Custom Target Enrichment Kit (0.5 Mb capture) and sequenced on a GS FLX System. 67 Gb of sequence data was obtained, with an average read length of 360 bases. The percentage of on-target reads was 60 percent and the target enrichment delivered a high degree of read-depth uniformity. Average read depth was 53X and 95 percent of targeted bases were covered at 20X or greater, enabling high-confidence SNP calling.*



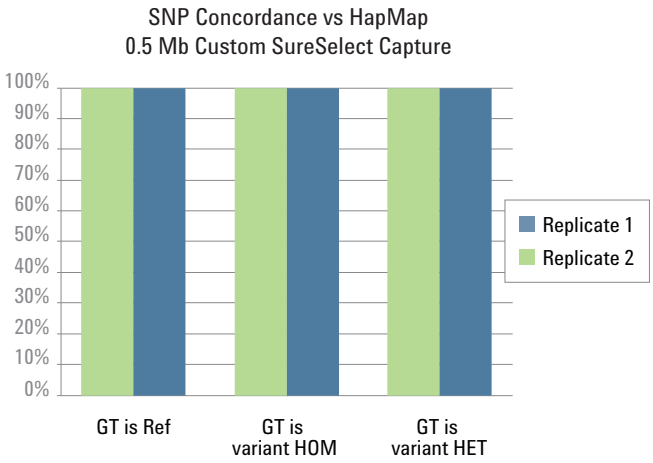




*Figure 2. SNP detection with 454 Sequencing after SureSelect target enrichment was highly sensitive and SNP calls were highly concordant with HapMap. 343 known SNPs from HapMap were assayed in replicate samples (NA10831) using SureSelect library preparation and target enrichment with a 0.5 Mb custom capture. The resulting libraries were sequenced on the 454 FLX platform and over 90 percent of the capture was sequenced at a depth of 20X or greater. a) Sensitivity of SNP detection relative to HapMap was very high with the SureSelect/454 platform, with 98 percent of reference SNPs detected. Variant homozygous SNPs and heterozygous SNPs were also detected at high rates — 95 and 97 percent, respectively. b) Of the SNPs detected, concordance with HapMap was 100 percent for reference SNPs as well as for homozygous and heterozygous variants.*

## SureSelect Custom Kits

| Reactions/Kit | <200 Kb | 200 Kb - 499 Kb | 500 Kb - 1.49 Mb | 1.5 Mb - 2.99 Mb | 3.0 Mb - 6.8 Mb | Roche 454 option code |
|---|---|---|---|---|---|---|
| **5** | G3360A | G3360A | G3360A | G3360A | G3360A | 003 |
| **25** | - | - | - | - | G3360B | 003 |
| **50** | - | - | - | - | G3360C | 003 |
| **100** | G3360K | G3360O | G3360S | G3360W | G3360D | 003 |
| **250** | G3360L | G3360P | G3360T | G3360X | G3360E | 003 |
| **500** | G3360M | G3360Q | G3360U | G3360Y | G3360F | 003 |
| **1000** | G3360N | G3360R | G3360V | G3360Z | G3360G | 003 |
| **2000** | - | - | - | - | G3360H | 003 |
| **5000** | - | - | - | - | G3360J | 003 |

## SureSelect Catalog Kits

| Reactions/Kit | Human X Chromosome (3.1 Mb) | Human Kinome (3.2 Mb) | Human All Exon (38 Mb) | Human All Exon v.2 (44 Mb) | Human All Exon Plus (38 + 6.8 Mb) | Human All Exon (50 Mb) | Roche 454 option code |
|---|---|---|---|---|---|---|---|
| **5** | G4459A | G3365A | G3362A | G3353A | G3363A | G3370A | 003 |
| **10** | - | G3365B | G3362B | G3353B | G3363B | G3370B | 003 |
| **25** | - | G3365C | G3362C | G3353C | G3363C | G3370C | 003 |
| **50** | - | G3365D | G3362D | G3353D | G3363D | G3370D | 003 |
| **100** | - | G3365E | G3362E | G3353E | G3363E | G3370E | 003 |
| **250** | - | G3365F | G3362F | G3353F | G3363F | G3370F | 003 |
| **500** | - | G3365G | G3362G | G3353G | G3363G | G3370G | 003 |
| **1000** | - | G3365H | G3362H | G3353H | G3363H | G3370H | 003 |
| **2000** | - | G3365J | G3362J | G3353J | G3363J | G3370J | 003 |
| **5000** | - | G3365K | G3362K | G3353K | G3363K | G3370K | 003 |
| **10000** | - | G3365L | G3362L | G3353L | G3363L | G3370L | 003 |

www.agilent.com/genomics/sureselect

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