# CGH+SNP



# Don't You Deserve Both? Copy Number and LOH on a Single Array



SurePrint G3 CGH+SNP Microarrays

- · Achieve highest quality copy number change data
- Find copy-neutral changes like loss of heterozygosity (LOH) and uniparental disomy (UPD) on the same array
- Make Agilent your single provider for a complete, automated CGH+SNP workflow
- Use eArray for easy customization of your CGH+SNP experiments





Agilent supports your cytogenetic studies by providing a comprehensive portfolio of instruments, reagents and microarrays for high-resolution, sensitive detection of genomic copy number changes and copy-neutral aberrations.

#### **1A Catalog CGH+SNP Microarrays**

- Use a single array for simultaneous, high-resolution detection of copy number changes and copy-neutral LOH (as small as ~5 Mb across the genome)
- Immediately implement validated, pre-designed catalog arrays in your lab

Format	Part Number	Median CGH probe spacing	Area of Focus	LOH/UPD resolution
2x400K	G4842A	7kb	Exons	~ 5-10Mb
4x180K	G4890A	25kb	ISCA* regions	~ 5-10Mb

#### **1B Customize with eArray**



- Use eArray to easily create custom array designs to target specific genomic regions\*\*
- Choose from among 65,000 SNPs and more than 28 million pre-qualified CGH probes, optimized during the design process for high-quality data

\*International Standards for Cytogenomic Arrays Consortium

<sup>\*\*</sup> eArray tutorials are available at www.agilent.com/genomics.



Hybridize and Scan



#### **2 DNA Preparation and Automation**

- Increase your throughput with the Bravo Automated Liquid Handling Platform, pre-programmed for SurePrint CGH-only or CGH+SNP microarrays
- Conserve precious samples with only 500 ng of input genomic DNA and no amplification required



#### **3 Hybridize and Scan**



- Increase data consistency using instruments and reagents optimized for Agilent microarrays
- · Scan your arrays with superior resolution

Agilent's High-Resolution Microarray Scanner

#### 4 Data Analysis

- Obtain meaningful copy number and LOH/UPD results using Agilent cytogenetic software
- Drill down to the individual chromosome or gene level with advanced graphical displays



### Comparisons Showing the High Quality of Agilent Data

Braggio, E. *et al.* Comparison of Commercial and Custom Microarrays: Which is the Best Choice for Copy-Number Analysis in Tumor Samples? *AACR 101st Annual Meeting,* April 17, 2010.

Curtis, C. *et al.* The pitfalls of platform comparison: DNA copy number array technologies assessed. *BMC Genomics*. 2009;10:588.

Kresse, S.H. *et al.* Evaluation of high-resolution microarray platforms for genomic profiling of bone tumours. *BMC Res Notes.* 2010;3:223.

Nasri, S. *et al.* Oligonucleotide array outperforms SNP array on formalin fixed paraffinembedded clinical samples. *Cancer Genetics and Cytogenetics*. 2010;198(1):1–6.



### **Related Literature**

5990-6274EN	Simultaneous detection of copy number and copy-neutral LOH using a single microarray
5990-6422EN	Agilent SurePrint G3 CGH+SNP Microarray Platform
5990-4660EN	Automating the CGH/CNV workflow with the Bravo Automated Liquid Handling Platform
5989-8555EN	Agilent's DNA Microarray Scanner With SureScan High-Resolution Technology
5990-4720EN	Agilent Genomic Workbench

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