

NimbleGen CGH HD2 Arrays

Roche NimbleGen introduces HD2 microarrays for Comparative Genomic Hybridization (CGH) analysis. With 2.1 million probes on a single slide, NimbleGen HD2 arrays offer the highest resolution CGH analysis for genome-wide detection of copy number gains and losses.

Advantages of NimbleGen CGH HD2 Arrays

- **2.1 Million Probes Enable Increased Resolution**

With 2.1 million probes on a single slide, the NimbleGen Human CGH 2.1M Whole-Genome Tiling v2.0D array enables genome-wide detection of copy number variants (CNVs) down to ~5kb in size and breakpoint mapping at gene-level resolution.

- **Most Comprehensive Genome Coverage**

The NimbleGen Human CGH 2.1M Whole-Genome Tiling v2.0D array offers enhanced probe coverage in low-copy repeat regions of the genome (e.g. segmental duplications) that are often associated with pathogenic chromosomal rearrangements.

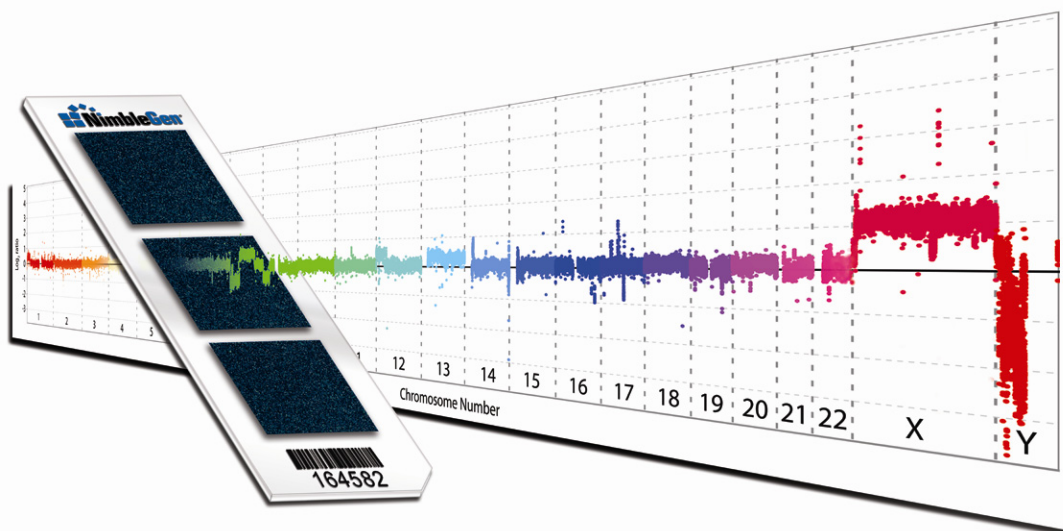
- **Highest Flexibility and the Most Current Genomes**

The inherent flexibility of the NimbleGen technology enables the rapid creation of targeted array designs (single region or multiple loci), using the most current sequence from any eukaryotic genome.

- **Complete Suite of Annotation Files**

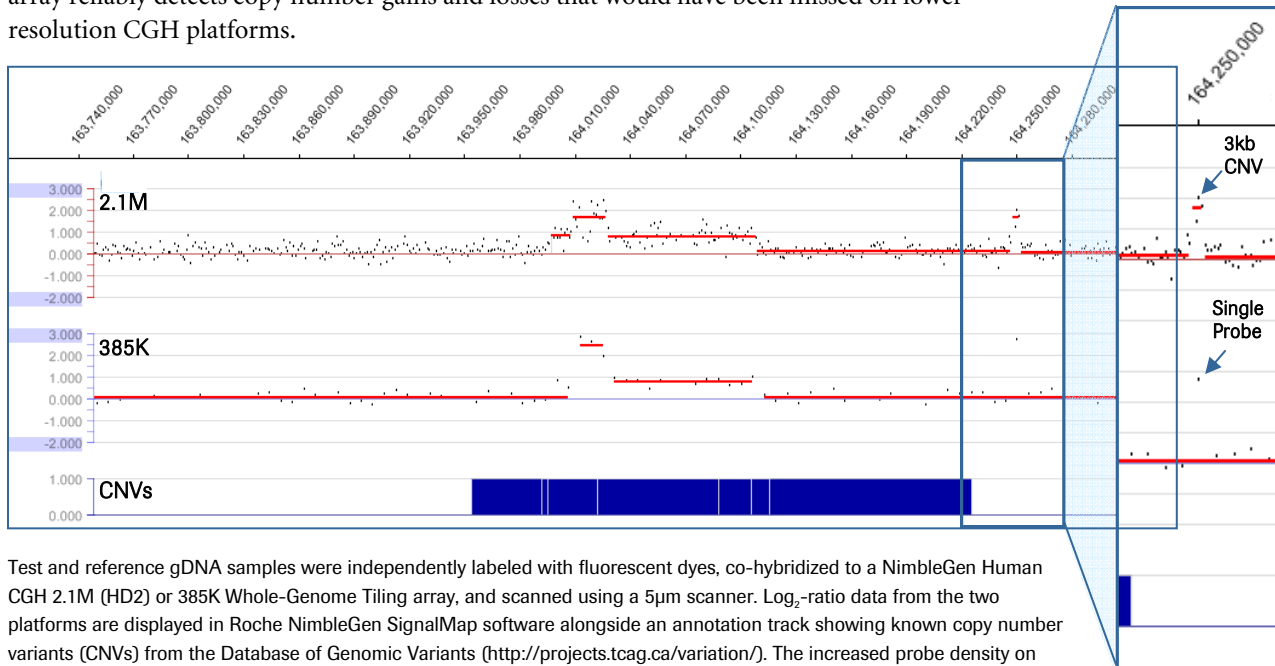
A complete suite of hg18 annotation files is provided with human designs and includes:

- Known genes
- Intron-exon boundaries
- Transcription start sites
- Known copy number variants
- Segmental duplications
- microRNAs
- Cytogenetic ideogram



NimbleGen CGH HD2 Analysis

With 2.1 million probes on a single slide, the NimbleGen CGH 2.1M Whole-Genome Tiling v2.0D array reliably detects copy number gains and losses that would have been missed on lower-resolution CGH platforms.



Test and reference gDNA samples were independently labeled with fluorescent dyes, co-hybridized to a NimbleGen Human CGH 2.1M (HD2) or 385K Whole-Genome Tiling array, and scanned using a 5µm scanner. Log₂-ratio data from the two platforms are displayed in Roche NimbleGen SignalMap software alongside an annotation track showing known copy number variants (CNVs) from the Database of Genomic Variants (<http://projects.tcag.ca/variation/>). The increased probe density on the CGH HD2 array (1.1kb vs. 6kb median probe spacing) enabled the detection of a novel ~3kb CNV that was detected by only a single probe on the 385K platform (see arrows above). In addition, fine structure of a previously reported CNV region was further elucidated using the CGH HD2 array.

NimbleGen Human CGH 2.1M Whole-Genome Tiling v2.0D Design Specifications

Catalog design name / number	Human CGH 2.1M WG Tiling v2.0D / B7074-00-01
Probe length	60mer
Median probe spacing	1,169bp
Total features	2.1 million
Feature size	13µm x 13µm
Array size	62mm x 14mm
Slide size	1" x 3" (25mm x 76mm) glass
Sequence source	UCSC Genome browser, NCBI

Contact: Roche NimbleGen, Inc.

Toll-free in US: (877) NimbleGen / (877) 646-2534
 (608) 218-7600
 ngsales@nimblegen.com
 www.nimblegen.com



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Roche NimbleGen, Inc.
 500 S Rosa Road
 Madison, WI 53719 USA