

HUMAN HEALTH

ENVIRONMENTAL HEALTH

# ARRAY CGX

## CGX Oligo Arrays Simplifying Cytogenetics

CGX Oligo Arrays are microarrays specifically

designed, developed and verified by Signature Genomics for the detection of small genetic aberrations associated with learning disability and dysmorphic features in research applications. The oligonucleotide probes on the CGX™, CGX™-HD and CGX™-SNP arrays distributed throughout the genome with specific focus on over 245 cytogenetically relevant regions, 980 functionally significant genes, pericentromeric regions, and subtelomeres.

Our arrays and reagents, together with our Genoglyphix software package allow a successful, streamlined and simple cytogenetic analysis workflow in your laboratory.

### CGX Oligo

#### Arrays characteristics that will benefit your work

- Proven design, representing over 245 known syndromic regions and over 980 functionally significant genes
- Three different array types based on the same design to adjust for throughput and detection requirements including AOH (Absence of Heterozygosity) and UPD (Uniparental Disomy) detection

- CGX™
- CGX™-HD
- CGX™-SNP

- All designs updated to HG19

| CGX™   | CGX™-HD   | CGX™-SNP   |
|--|---|--|
| <ul style="list-style-type: none"> <li>• 8-plex array for detection of copy number abnormalities</li> <li>• Resolution of ~190 kb in the backbone, and ~28 kb in the targeted regions</li> <li>• Evaluation of over 245 recognized genetic syndromes and over 980 gene regions of functional significance in human development</li> <li>• Covers subtelomeric and pericentromeric regions</li> </ul> | <ul style="list-style-type: none"> <li>• 4-plex array for detection of copy number abnormalities</li> <li>• Resolution of ~40 kb in the backbone, and ~20 kb in the targeted regions</li> <li>• Evaluation of over 245 recognized genetic syndromes and over 980 gene regions of functional significance in human development</li> <li>• Covers subtelomeric and pericentromeric regions</li> </ul> | <ul style="list-style-type: none"> <li>• 4-plex array for detection of copy number abnormalities and Absence of Heterozygosity (AOH) and Uniparental Disomy (UPD)</li> <li>• Resolution of ~80 kb in the backbone, and ~20 kb in the targeted regions</li> <li>• Evaluation of over 245 recognized genetic syndromes and over 980 gene regions of functional significance in human development</li> <li>• Covers subtelomeric and pericentromeric regions</li> <li>• Detection of contiguous stretches of AOH (&lt;10 Mb)</li> <li>• Detection of triploidy</li> </ul> |



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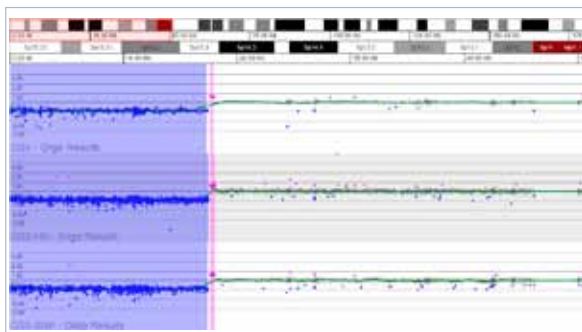
## CGX Oligo Arrays

All CGX Oligo arrays offer whole genome coverage, with specific cytogenetically relevant regions targeted in higher resolution. The same design approach was used across all three array formats to provide flexibility with regards to throughput needs and resolution requirements.

Furthermore, with the addition of CGX™-SNP arrays to our cytogenetic array portfolio we now offer researchers the ability to detect Absence of Heterozygosity (AOH) and UPD (Uniparental Disomy) across the genome.

Our complementary array designs allow you to design the experiment to your requirements and offer an enhanced capability to detect and characterize chromosome imbalances that are too small to be identified by conventional karyotyping.

Figure 1



The data shown here demonstrate the high level of reproducibility achieved with all three array formats using a representative research sample with a 8.14 Mb deletion in the Cri-du-Chat region, followed by a small 328 kb duplication on chromosome 5p.

Figure 2



Figure 2 shows the result of a chr7 UPD research sample analyzed on the CGX™ SNP array. While no copy number change can be observed in this research sample, the SNP analysis clearly identifies UPD across chromosome 7.

## ORDERING INFORMATION

| Part Number | Description                     | Comment           | Part Number  | Description                                  | Comment           |
|-------------|---------------------------------|-------------------|--------------|--|-------------------|
| 4113-0010   | CGX™ HD/SNP Gasket Slides-100   | Research Use Only | 4125-0020    | CGX™ SNP (4 slides per pack)                 | Research Use Only |
| 4114-0010   | CGX™ Gasket Slides-100          | Research Use Only | 1015-0010    | CGX™ Hybridization chamber, stainless        | Research Use Only |
| 4115-0010   | CGX™ HD/SNP Gasket Slides-20    | Research Use Only | 1015-0040    | CGX™ Hybridization oven                      | Research Use Only |
| 4116-0010   | CGX™ Gasket Slides-20           | Research Use Only | 1015-0030    | CGX™ Hybridization oven rotator              | Research Use Only |
| 4117-0010   | CGX™ Ozone-barrier slide covers | Research Use Only | 4130-0010    | CGX™ Cot-1 Human DNA                         | Research Use Only |
| 4118-0020   | CGX™ (2 slides per pack)        | Research Use Only | 4131-0010    | CGX™ Oligo aCGH Hybridization Kit            | Research Use Only |
| 4119-0020   | CGX™ (4 slides per pack)        | Research Use Only | 4132-0010    | CGX™ Oligo aCGH Wash Kit                     | Research Use Only |
| 4122-0020   | CGX™ HD (2 slides per pack)     | Research Use Only | 4135-0010-P4 | CGX™ DNA Labeling Kit – Purification Columns | Research Use Only |
| 4123-0020   | CGX™ HD (4 slides per pack)     | Research Use Only | 4134-0010    | CGX™ Stabilization and Drying Solution       | Research Use Only |
| 4124-0020   | CGX™ SNP (2 slides per pack)    | Research Use Only | 4135-0010    | CGX™ DNA Labeling Kit                        | Research Use Only |

CGX Oligo Arrays are Research Use Only products. Not for use in diagnostic procedures.  
CGX Oligo Arrays are designed by Signature Genomics and manufactured by Agilent Technologies, Inc.

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