

Molecular Karyotyping Service

General Information

Over the last few decades, techniques in the field of cytogenetics have greatly improved, which has led to a significant increase in the detection rate of chromosomal aberrations. In traditional cytogenetic techniques, the resolution level is limited to at best ≈ 5 Megabases (Mb), and smaller chromosomal aberrations were generally not detected. In order to solve this problem and achieve higher resolution, it is necessary to replace metaphase chromosomes with oligonucleotide arrays. The resolution of oligonucleotide arrays is up to 200 times greater than conventional chromosome-based techniques.

Affymetrix and Agilent microarray platforms are among the world's leading DNA chip technologies. Agilent's Comparative Genomic Hybridisation (CGH) arrays provide a powerful tool for the genome-wide detection of copy number variations (CNVs). Affymetrix GeneChip® Human Mapping SNP 6.0 and the Cytogenetics can be used for SNP Genotyping, for the detection of genetic imbalances, such as copy number variants (CNVs), loss-of-heterozygosity (LOH), and copy number-neutral LOH; the so-called uniparental disomy.



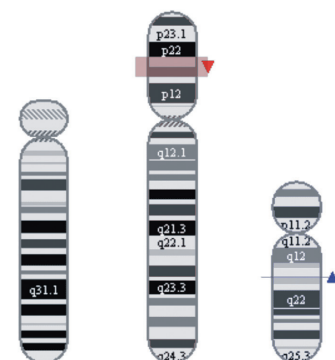
**Agilent
Certified
Services Provider**
Microarray-Based
Genomic Analysis

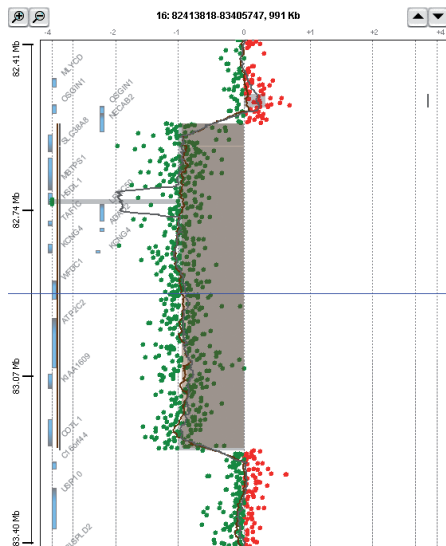
Why Choose ATLAS Biolabs' Services?

	Agilent 1x1M	Agilent 2x400K	Agilent 4x180K	Agilent 8x60K	Affymetrix Cytogenetics Array	Affymetrix SNP 6.0
Total features	974,016	420,288	180,880	62,976	2,761,979	1,800,000
Average Probe spacing (kb)	3.2	7.3	17.6	54.5	1.1	3.8

Why Choose ATLAS Biolabs' Services?

- ATLAS Biolabs is an Affymetrix Service Provider
- ATLAS Biolabs is an Agilent Service Provider
- ATLAS Biolabs is certified according to the international standard DIN EN ISO 9001:2008
- ATLAS Biolabs' personnel have successfully analysed tens of thousands of microarrays since 2001
- Our service is fast, reliable and cost-effective
- We offer professional assistance for both study design as well as further data analysis and interpretation





Molecular Karyotyping Service Portfolio

Organisms	Agilent Array CGH	Affymetrix Cytogenetics Array	Affymetrix SNP 6.0
Man	+	+	+
Mouse	+	-	-
Rat	+	-	-
Chicken	+	-	-

Applications

Detection of ...	Agilent Array CGH	Affymetrix Cytogenetics Array	Affymetrix SNP 6.0
Unbalanced Translocation	+	+	+
Amplification	+	+	+
Deletion	+	+	+
LOH analysis	-	+	+
Copy number-neutral LOH	-	+	+

LOH = loss of heterozygosity

Service Range

- **Full Service:** Customer sends genomic DNA. ATLAS Biolabs takes over the complete processing procedure including sample labelling, array hybridisation, washing, scanning and basic data analysis.

Quality control

ATLAS Biolabs is certified according to the international standard DIN EN ISO 9001:2008.

- Quality and quantity control of genomic DNA by gel and photometric analyses
- Quantity and the incorporation rate of each labelled DNA sample synthesised at ATLAS Biolabs will be determined by photometric analysis
- All quality assurance procedures are electronically documented and available for our customers on demand

Data Delivery

- 3-4 weeks for less than 30 samples. For more than 30 samples, please inquire
- CD-ROM/DVD sent to customer includes:
Original data, results file in EXCEL or TXT format