Tiling Arrays

Affymetrix unique high-density tiling arrays accommodate 6.4 million features per array, allowing whole-genome (human or mouse) coverage on just a few arrays, delivering high-performance, cost-effective whole-genome ChIP-on-chip analysis.
More and more researchers are choosing Affymetrix products for whole genome ChIP-on-chip analysis for the following reasons:

1. The lowest number of arrays covers the genome of interest
2. High resolution probe are design to pinpoint multiple data points per binding region, resulting in high accuracy and sensitivity
3. Easy to use tools for preliminary and advanced data analysis
4. With 25mer probes spaced every 35 base pairs across an entire genome, It allows to analyze all coding and non-coding regions for an unbiased view of the genome, which is especially important as non-coding regions contain several enhancer/repressor binding sequences

ChIP-on-chip is a complex process and each step of the protocol will need to be validated by users in their own applications. Particular areas of validations are:

1. Verification of antibody utility for ChIP (specificity, enrichment factor, etc.)
2. Crosslinking and sonication conditions
3. Availability of known positive control for IP enrichment QC
4. What negative controls will work best (non-specific IP/Mock IP/Input)?
5. Amplification and fragmentation of post-IP DNA
6. QC for enrichment pre-and post-amplification

At the UHN-Microarray Centre we provide service for Tiling arrays from the point of amplified DNA. 9ug of amplified DNA is required to carry on with the fragmentation and labelling followed by hybridization, wash, stain and scan.

More information is available upon contacting us.