

Genomic biotechnology products that stand out

ADVANCED GENOMIC AND CYTOGENETIC CAPABILITIES:

FLUORESCENCE IN SITU HYBRIDIZATION PROBES AND KITS

MICROARRAY – IMPROVED COMPARATIVE GENOMIC HYBRIDIZATION

NEXTGEN SEQUENCING – ENRICHMENT POOLS – BIODOSIMETRY



AB INITIO SINGLE COPY TECHNOLOGIES FOR GENOMICS:

- MORE COMPREHENSIVE
- MORE REPRODUCIBLE
- BETTER GENOMIC COVERAGE
- MORE SAMPLE MULTIPLEXING

SOFTWARE SOLUTIONS:

- INTERPRETING VARIANTS OF UNKNOWN SIGNIFICANCE
- DETERMINING RADIATION EXPOSURE



Many diagnostic genomic hybridization and sequencing technologies rely on identification of single copy DNA sequence content. Repetitive sequences in the genome are blocked. Blocking reagents used in fluorescence in situ hybridization and array comparative genomic hybridization produce noisy data. **Cytognomix** has developed, patented and implemented the *ab initio* method for deriving unique genomic sequence intervals that obviates the need to block repeats. Fluorescence in situ hybridization (FISH) probes are available throughout the genome, with reagent kits required to use them. Genome-wide microarray and capture enrichment designs have also been validated.

Better quality data & denser genomic coverage at lower cost per sample

COMPREHENSIVE BIOINFORMATIC DESIGNS

- 223,000 probes designed for fluorescence *in situ* hybridization (FISH)
- Kits for single copy FISH consisting of hybridization and other solutions to detect and image probes
- 979,347 intervals designed for array comparative genomic hybridization
- Targeted enrichment pools for 200 genes mutated at high frequencies in cancer
- Software and algorithms for repeat catalog independent design for any genome.

ADVANTAGES

- More accurate and reproducible results providing higher quality data than competitor products. Important for filing of medical device application to regulatory agencies.
- Call copy number genotypes and detect abnormalities with fewer DNA probes.
- Because fewer probes are required, more samples are analyzed per array (sectored arrays), resulting lower per sample costs, without compromising performance.

APPLICATIONS

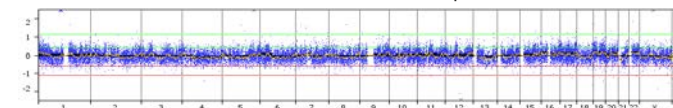
FISH



Ab initio single copy FISH probes cover genomic regions previously inaccessible by traditional repeat masking. Kits needed to use these probes include probe, hybridization and wash solutions and detection reagents are available.

MICROARRAY

aCGH microarrays that are more reproducible than other commercial products.



HYBRIDIZATION ENRICHMENT

Designs that produce next generation sequencing capture reagents with more mappable sequence reads and higher sequence quality scores than other approaches.



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