



Data Sheet

Affymetrix GeneChip® Sequence Analysis Software (GSEQ) Version 4.0

Benefits

- Automated base calling with >90 percent Call Rates and >99.9 percent accuracy
- Reporting of Call Rate by sample and by individual fragment
- Automatic assignment of base calls with editing and edit tracking
- Detailed analysis of No-Calls through display of Force Call and No Call criteria
- Alignment and display of sequences from multiple samples
- Display of genomic positions and PCR start/stop positions
- SNP Viewer with graphical display summarizing SNP calls by samples at SNP sites
- Trace view of probe intensities in the context of adjacent bases
- File Sets allows customized groupings of samples from multiple projects
- Flexible Export options: Export FASTA format of all sequences or of SNPs only

Affymetrix GeneChip® Sequence Analysis Software (GSEQ) Version 4.0

Affymetrix GeneChip® Sequence Analysis Software (GSEQ) 4.0 is an evolution from GeneChip® DNA Analysis Software (GDAS) 3.0 and builds on the high-quality base calling and streamlined data analysis of GDAS 3.0. GSEQ 4.0 enables scientists to perform comparative sequencing by providing high-quality sequence information and automatic detection of SNP sites in a single analysis package.

GSEQ Benefits include:

- Automated base calling with >90 percent Call Rates and >99.9 percent accuracy

- Reporting of Call Rate by sample and by individual fragment
- Automatic assignment of base calls with editing and edit tracking
- Detailed analysis of no-calls through display of Force Call and No Call criteria
- Alignment and display of sequences from multiple samples
- Display of genomic positions and PCR start/stop positions
- SNP Viewer with graphical display summarizing SNP calls by samples at SNP sites
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- File Sets allows customized groupings of samples from multiple projects
- Flexible Export options: Export FASTA format of all sequences or of SNPs only

Figure 1: GeneChip® Sequence Analysis Software provides Trace views of probe intensities in the context of adjacent bases.

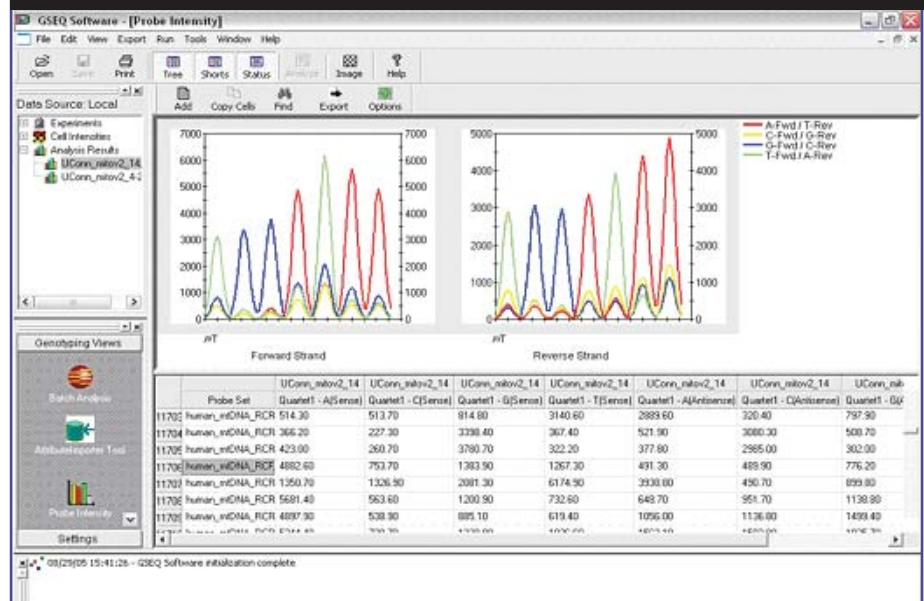
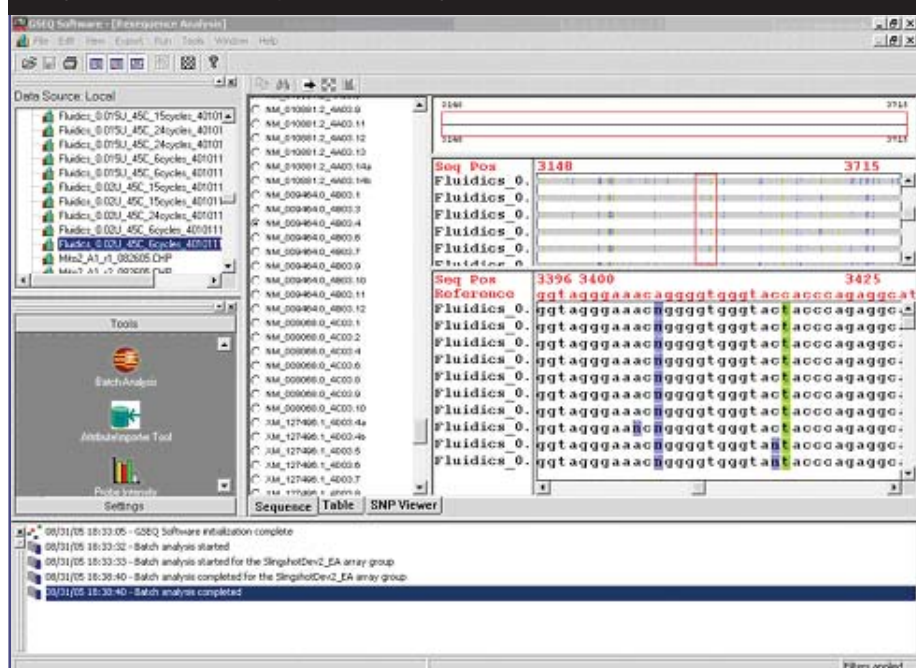


Figure 2: GeneChip® Sequence Analysis Software provides easy visualization of multiple samples and automatically identifies SNP positions.



Automated Base Calling

GSEQ 4.0 provides automatic base calls by employing a unique algorithm derived from the work of Cutler, *et al.* The benefits include:

- Automatic base calling of both heterozygotes and homozygotes
- Call Rates >90 percent
- High base-calling accuracy (>99.9 percent)
- High reproducibility (>99.9 percent)
- Automatic SNP detection and generation of SNP summary report

Streamlined Workflow

GSEQ displays sequence information in both tabular and graphic modes. The Sequence Viewer enables visualization of the sequence across multiple samples. Non-reference positions are automatically highlighted, allowing scientists to view sequence variations at a global level or

zoom in on a particular fragment for detailed analysis. While viewing putative SNP positions, researchers can also view associated probe intensity data and conveniently edit the base calls as needed. The SNP Viewer provides a summary of all SNP sites across multiple samples. Finally, sequence data and SNP sets can be exported as FASTA format or tab-delimited text files for downstream analysis.

Summary

GSEQ 4.0 provides an integrated analysis workflow to enable high-content, high-throughput, and accurate sequencing applications. In addition, by using the GCOS Database, scientists can conveniently manage data and experiment information at the desktop level, thus eliminating the cost of supporting a separate database product.

Recommended Computer and Software Requirements

- 2 GHz Intel® Pentium® 4 Processor
- 60 GB Available Hard Disk Space
- 1 GB RAM
- Microsoft Windows® XP Professional with Service Pack 1a or Service Pack 2.
- Microsoft Windows® 2000 Professional with Service Pack 4
- MSDE 2000 with Service Pack 3
- Microsoft® Internet Explorer 6.0 with Service Pack 1 or higher
- To run the Affymetrix GeneChip® Sequence Analysis Software (GSEQ) v.4.0, the Affymetrix GeneChip® Operating Software (GCOS) v.1.4 or greater must be installed and operational on the same computer
- GCOS Server version 1.4 or greater

SPECIFICATIONS

Data Input

- .CEL files from GCOS managed within GCOS Process Database
- GeneChip® CustomSeq® Library files

Reports and File Output

- Resequencing CHP files
- Algorithm Report
- SNP Report

Algorithm

- Resequencing Algorithm Version 1 for 20µm x 25µm CustomSeq arrays
- Resequencing Algorithm Version 2 for 8µm CustomSeq arrays

NOTES:

Ordering Information

Affymetrix GeneChip® Sequence Analysis Software (GSEQ) Version 4.0

690052 *Affymetrix GeneChip® Sequence Analysis Software v.4.0*

To Order

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