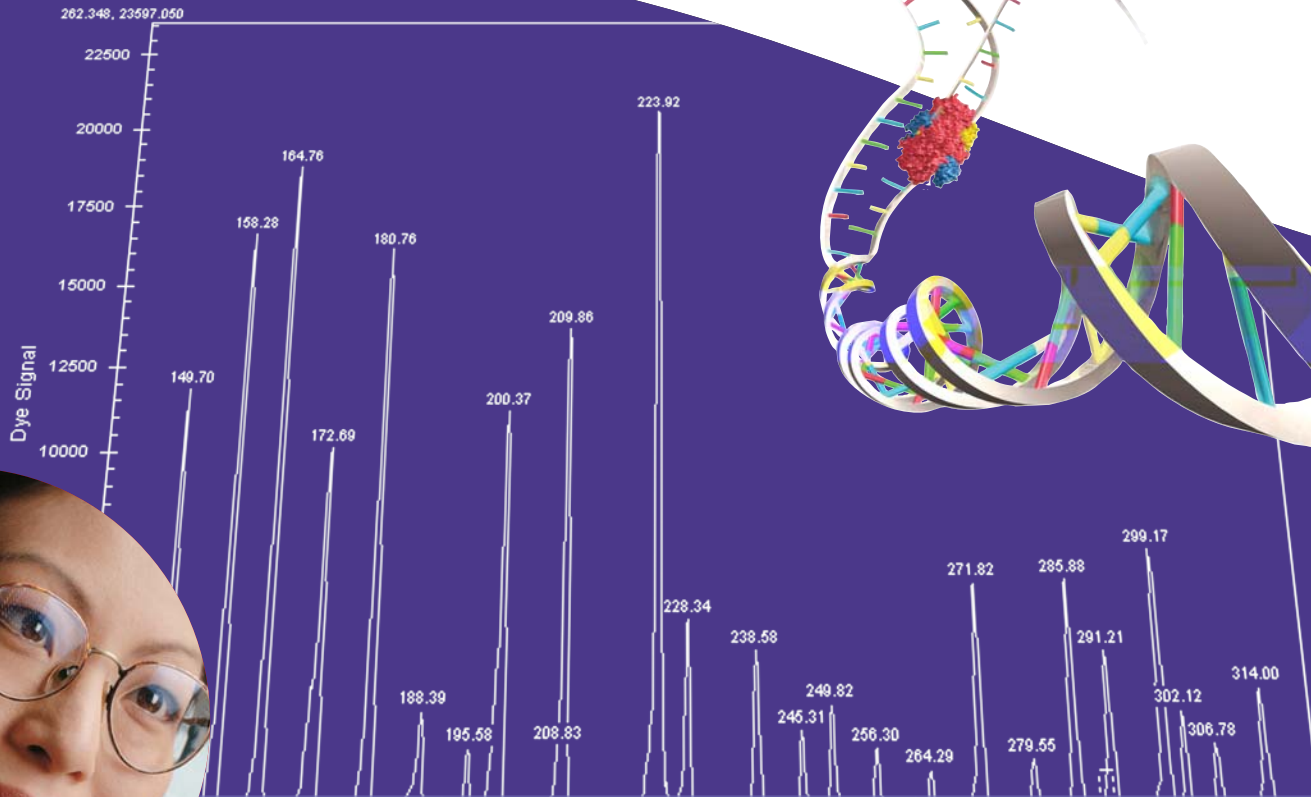




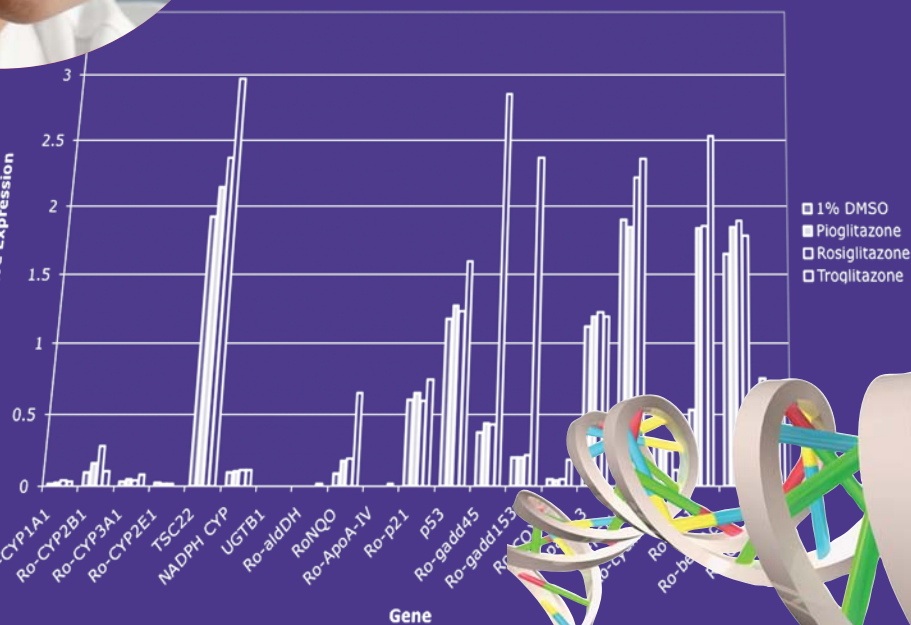
*The single best multiplex solution
for quantitative, high-throughput,
cost-effective gene expression analysis.*

GENOMELAB™ GEXP

GENETIC ANALYSIS SYSTEM



**Glitazone Expression
Clone9 Rat Hepatocyte Cell Line**



Export Report

Multiplex: RoMultitox 2 ☒ Display normalized data set ☐ Profile Report ☐ Compressed Report

☒ NM_012922

	Rep_#1	Rep_#2	Rep_#3	Mean	Std Dev	%CV
Allyl isothiocyanate 010 uM	1.717	1.553	1.512	1.594	0.109	6.819
Allyl isothiocyanate 050 uM	1.787	1.69	1.658	1.712	0.067	3.926
Allyl isothiocyanate 100 uM	1.999	1.82	1.624	1.814	0.188	10.334
Butylated hydroxytoluene 010 uM	1.555	1.582	1.513	1.55	0.035	2.246
Butylated hydroxytoluene 050 uM	1.994	1.876	N/A	1.935	0.084	4.339
Butylated hydroxytoluene 100 uM	1.576	1.854	1.736	1.722	0.14	8.109
Chloro-1,3-phenylenediamine (4) 010 uM	1.552	1.719	1.516	1.596	0.108	6.789
Chloro-1,3-phenylenediamine (4) 050 uM	1.622	2.05	1.591	1.754	0.257	14.6
Chloro-1,3-phenylenediamine (4) 100 uM	1.821	1.486	1.482	1.596	0.195	12.2
Chlorophenoxymethylpropionic acid 010 uM	1.308	1.494	1.434	1.412	0.095	6.6
Chlorophenoxymethylpropionic acid 050 uM	1.733	1.558	1.566	1.619	0.099	6.1
Chlorophenoxymethylpropionic acid 100 uM	1.671	1.621	1.863	1.718	0.128	7.4
Chlorothalonil 010 uM	1.601	1.552	1.78	1.644	0.12	7.3
Chlorothalonil 050 uM	1.717	1.801	1.701	1.74	0.054	3.1
Chlorothalonil 100 uM	N/A	N/A	N/A	N/A	N/A	N/A
Diaminotoluene (2,4) 010 uM	1.455	1.637	1.547	1.546	0.091	5.9
Diaminotoluene (2,4) 050 uM	1.299	1.516	N/A	1.407	0.154	10.9
Diaminotoluene (2,4) 100 uM	1.423	1.26	1.556	1.413	0.148	10.5
Diethylthiourea (N,N') 010 uM	1.608	1.596	1.607	1.604	0.007	0.4
Diethylthiourea (N,N') 050 uM	1.532	1.413	1.498	1.481	0.062	4.2



Reduce bottlenecks with our high-throughput, low-cost solution.

Finally, quantitative gene expression that's cost-effective too. The GenomeLab™ GeXP Genetic Analysis system utilizes a patented, highly multiplexed PCR* approach to quickly and efficiently look at the expression of multiplexed gene sets with greater sensitivity and speed. Building on more than a decade of innovative leadership in laboratory automation and capillary electrophoresis technology, the GenomeLab GeXP clears your pathway to discovery.

The GenomeLab GeXP utilizes dual plates and sample tracking technology to provide an advanced, industry-leading genetic analysis solution. The result is a fully automated, high-resolution system that adapts well to daily workflow changes in sample type and complexity.



Multiple applications for gene expression.

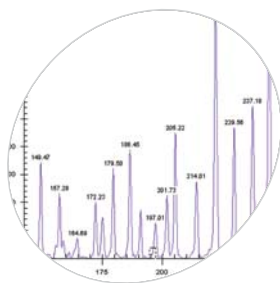
- Discovery of Gene Targets
- Pathway Analysis
- Biomarker Discovery
- Microarray Data Validation
- RNAi Studies
- Drug Characterization
- Development of Signatures
- Monitor Gene Regulation



Our preformulated, ready-to-use GenomeLab GeXP Reagent Kits are optimized for effortless and robust qualitative gene expression. The kits include reagents for discovery, master mix reagents for multiplexing user-defined genes and GenomeLab GeXP multiplex kits for performing quantitative gene expression studies on human, mouse or rat genes.



The GenomeLab GeXP Genetic Analysis System has the ability to process and track samples in two 96-well plates. An array of eight capillaries takes full advantage of the 96-well plate format, while reducing the cost and complexity associated with microarrays. Samples are automatically denatured on-line prior to electrokinetic injection.



High-throughput quantitative gene expression.

With a capacity to analyze up to 30 genes/reaction, the scalable GenomeLab GeXP enables the monitoring of tens to hundreds of genes for up to tens of thousands of samples. A capacity that is unmatched by other methods in the industry.



Cost-effective gene expression.

By lowering PCR expenses and improving efficiency, the multiplex power built into the GenomeLab GeXP enables you to analyze up to 30 genes/sample at a dramatically reduced cost per sample.



Low sample requirement.

With this super-sensitive gene expression technology, microarray discoveries can be translated into high-throughput assays with good correlation between multiplexed PCR and microarray data. Coupled with capillary electrophoresis readout, this method can be efficiently used to look at focused sets of genes using very small amounts of total RNA (5 ng total RNA/reaction), or varied quality of RNA.



Heightened sensitivity to gene targets.

Featuring eXpress Profiling software with universal primer design – the GenomeLab GeXP overcomes the built-in bias of traditional PCR amplification methods. By minimizing PCR artifacts and maintaining relative gene ratios and a good working dynamic range, it improves the speed and sensitivity of quantitating a targeted set of genes.

Sample	Rep #1	Rep #2	Rep #3
AA099182	0.108	0.109	0.11
3-Methylcrotonyl-CoA	0.021	0.017	0.024
Adrenomedullin	0.015	N/A	0.018
Adrenomedullin	0.015	0.012	0.015
Adrenomedullin	0.023	0.024	0.028
Adrenomedullin	0.015	0.015	0.015
Adrenomedullin	0.015	0.015	0.015
Adrenomedullin	0.017	0.021	0.017
Adrenomedullin	N/A	N/A	N/A
Adrenomedullin	0.019	0.021	0.021
Adrenomedullin	0.028	0.02	0.02
Adrenomedullin	0.023	0.02	0.02
Adrenomedullin	0.027	0.027	0.027

Results you can use.

The GenomeLab GeXP has a sophisticated set of software tools for designing primers through to data management of high-throughput gene expression studies.



Automated sample setup.

For sample preparation, the Biomek® series of automated liquid handlers are fully compatible with the GenomeLab GeXP.



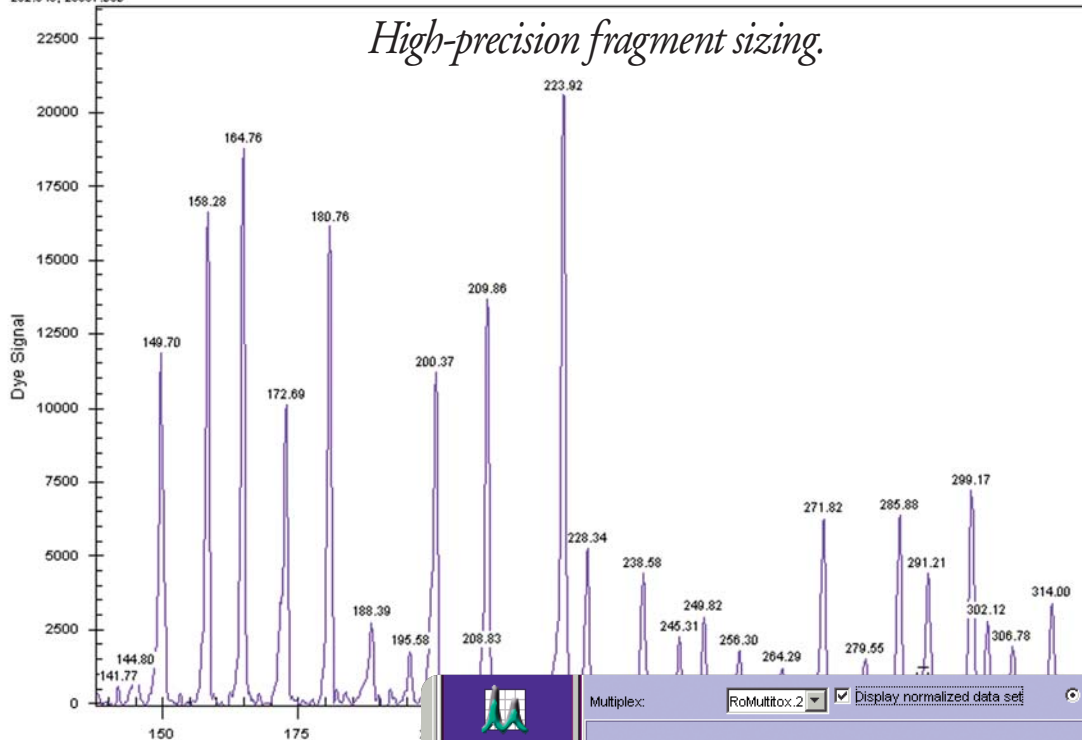
Sample tracking made simple.

An integrated bar code reader ensures accurate sample tracking and reporting. It also lets you create GenomeLab GeXP sample setup with automated liquid handlers such as the Biomek® series automated laboratory workstation.

De Novo DNA Sequencing
Heterozygote Detection
Confirmatory Sequencing
Mutation Analysis
Allele Identification
SNP Scoring
Microsatellite Instability
AFLP® Fingerprinting
Gene Expression

The GenomeLab GeXP is flexible enough to adapt to a broad spectrum of applications, yet easily accessible to a wide range of users. This system provides high-quality DNA sequencing and high-precision fragment sizing, with sophisticated software algorithms. The GeXP software automatically analyzes quality and highlights results that need further review, allowing you to rapidly assess and interpret your data.

262.348, 23597.050



All parameters associated with results are at your fingertips enabling data to be reviewed with ease. The electropherograms may be further stacked and overlaid to facilitate data comparison.



Normalize Peaks

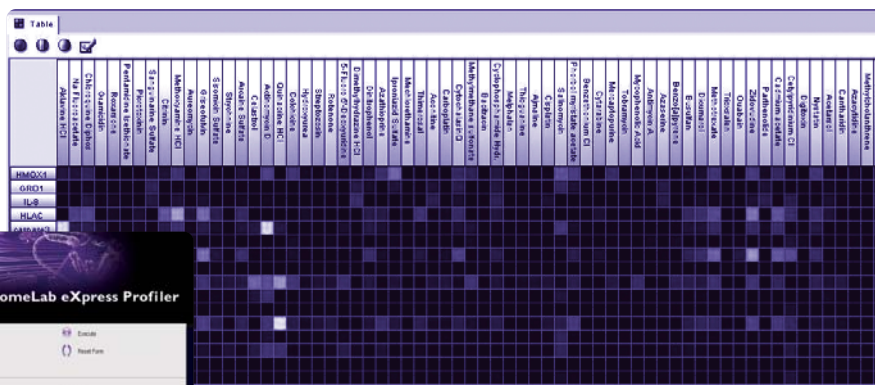


Export Report

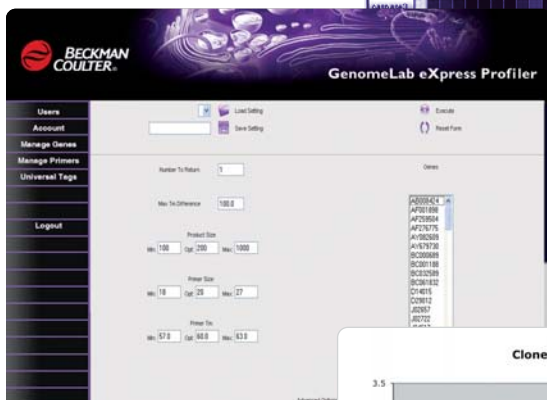
Multiplex: RoMultitox.2 ☒ Display normalized data set ☐ Profile Report ☐ Compressed Report

	Rep_#1	Rep_#2	Rep_#3	Mean	Std Dev	%CV
Allyl isothiocyanate 010 uM	4.419	3.98	4.078	4.159	0.231	5.545
Allyl isothiocyanate 050 uM	3.863	3.625	3.795	3.761	0.123	3.257
Allyl isothiocyanate 100 uM	3.655	3.446	3.156	3.419	0.251	7.328
Butylated hydroxytoluene 010 uM	3.842	3.887	4.051	3.927	0.11	2.8
Butylated hydroxytoluene 050 uM	4.898	4.529	N/A	4.713	0.261	5.542
Butylated hydroxytoluene 100 uM	3.92	4.407	4.232	4.186	0.247	5.897
Chloro-1,3-phenylenediamine (4) 010 uM	3.755	4.148	4.011	3.971	0.199	5.017
Chloro-1,3-phenylenediamine (4) 050 uM	3.784	4.469	3.713	3.988	0.417	10.46
Chloro-1,3-phenylenediamine (4) 100 uM	4.871	3.849	3.943	4.221	0.565	13.381
Chlorophenoxymethylpropionic acid 010 uM	3.769	3.981	3.815	3.855	0.111	2.887
Chlorophenoxymethylpropionic acid 050 uM	5.092	5.219	4.284	4.865	0.507	10.428
Chlorophenoxymethylpropionic acid 100 uM	4.714	4.229	6.163	5.035	1.006	19.98
Chlorothalonil 010 uM	3.765	3.445	3.832	3.68	0.207	5.614
Chlorothalonil 050 uM	3.821	4.08	3.577	3.826	0.252	6.577
Chlorothalonil 100 uM	N/A	N/A	N/A	N/A	N/A	N/A
Diaminotoluene (2,4) 010 uM	3.85	3.951	4.11	3.97	0.131	3.311

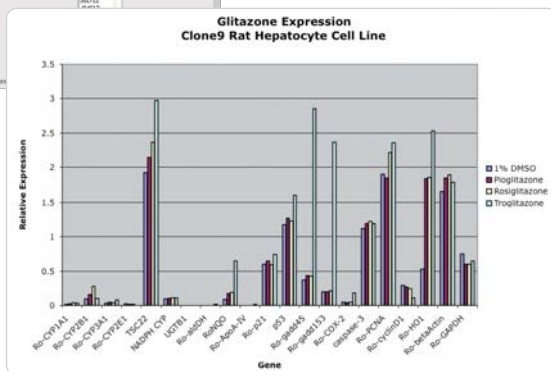
The GenomeLab GeXP is invaluable. Nothing else enables you to quickly and cost-effectively look at 20-30 genes in a single reaction.



eXpress Map advanced software permits a quick macro view of entire study's data.



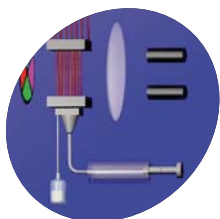
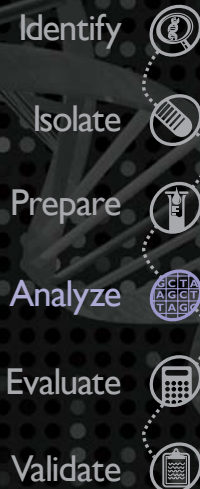
GenomeLab eXpress Profiler takes the uncertainty out of assay design by providing fast, automated primer design and multiplex development, calculation of relative gene expression values and data checking, and first pass data analysis.



A single eXpress Profiling multiplex provides valuable insight and data that can be used to capture, for example, multiple mechanisms of toxicity.

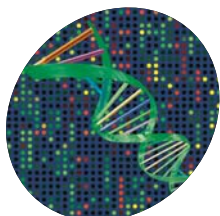
The GenomeLab GeXP Genetic Analysis System is an important part of a comprehensive set of interrelated GenomeLab solutions specifically designed to accelerate genetic research. By encompassing virtually every step of the process, our flexible and highly efficient systems function as an extension of your thinking, helping you make important research decisions faster and with more confidence than ever before.

GENOME^{LAB}
FROM TISSUES TO TARGETS.



Long-life lasers.

On-column, laser induced fluorescence with auto capillary alignment ensures sensitive and reliable detection. Long-life diode lasers are used to excite infrared dyes, providing higher sensitivity at a fraction of the cost of argon ion lasers.



Flexible genetic analysis.

Analysis is a critical step in the genomics process, and involves determining sequences, identifying sequences and genetic elements, genotyping, gene expression, detecting mutations, quantitative expression, and viral load.



World-class support at your fingertips.

Wherever you are, our world-class customer service and support is dedicated to making sure your Beckman Coulter system functions at peak efficiency throughout its lifetime. Across the globe, a network of technical and application experts are available online, on site, and by phone to help with all your system support needs.

Identify



- Flow cytometry
- Automated fluorescence microscopy
- Cell viability analysis

Isolate



- Automated liquid handling
- General purpose centrifugation
- High performance centrifugation
- Ultracentrifugation
- HPLC

Prepare



- Automated liquid handling
- Centrifugation
- Chemistries
- Plate readers
- Spectrophotometry

Analyze



- Capillary electrophoresis
- Microarray technology

Evaluate



- Microarray technology
- Software informatics

Validate



- Lab-developed protocols
- Research protocols

ORDERING INFORMATION


GenomeLab™ GeXP Genetic Analysis System

Part No.

A26572

- Integrated bar code reader
- 192 sample capacity, 2 x 96-well sample microplate
- Uses linear polyacrylamide (LPA) – maximizing performance
- Coated capillary array
- Four-wavelength laser-induced fluorescence detection
- 96-well microplate format for samples/buffer
- Eight samples read in parallel
- Automatic gel replenishment
- Automatic sample denaturation and introduction
- Single setup facilitates gene expression analysis, DNA sequencing and fragment analysis
- Developed for Windows XP Operating System

Specifications

Weight	180 lb (81.6 kg)
Height	37 in (94 cm)
Width	24 in (61 cm)
Depth	26 in (66 cm)
Power	100-240 VAC, 5A, 50/60 Hz
Excitation	Two diode lasers  Class 1 laser hazard

Gene Expression

- User-defined gene kits
 - Primer design software tools to develop primers for genes from various organisms
- GenomeLab Multiplex kits with gene-specific primers for performing quantitative gene expression studies on human, mouse or rat genes

Dye Terminator Cycle Sequencing (DTCS)

- Optimized four-color DTCS methods
- 700 bases per sample at better than 98% accuracy in about 100 minutes cycle time

Fragment Analysis

- Automatic allele identification
 - Resolves
 - + 1 base at 400 bases
 - + 2 bases at 600 bases
- Automatic SNP scoring

The GenomeLab GeXP – and all our GenomeLab offerings – are an important part of a broad continuum of Beckman Coulter products, including automated liquid handling, capillary electrophoresis, centrifugation, ultracentrifugation, DNA sequencing, electrochemistry, flow cytometry, fragment analysis, HPLC, integrated core systems, microarrays, particle characterization, scintillation counting, and spectrophotometry.

For information on our comprehensive line of GenomeLab systems, please contact your local Beckman Coulter representative or visit our web site at

www.beckmancoulter.com/genomelab

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Developing innovative solutions in Systems Biology.

Innovate **Automate**
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