

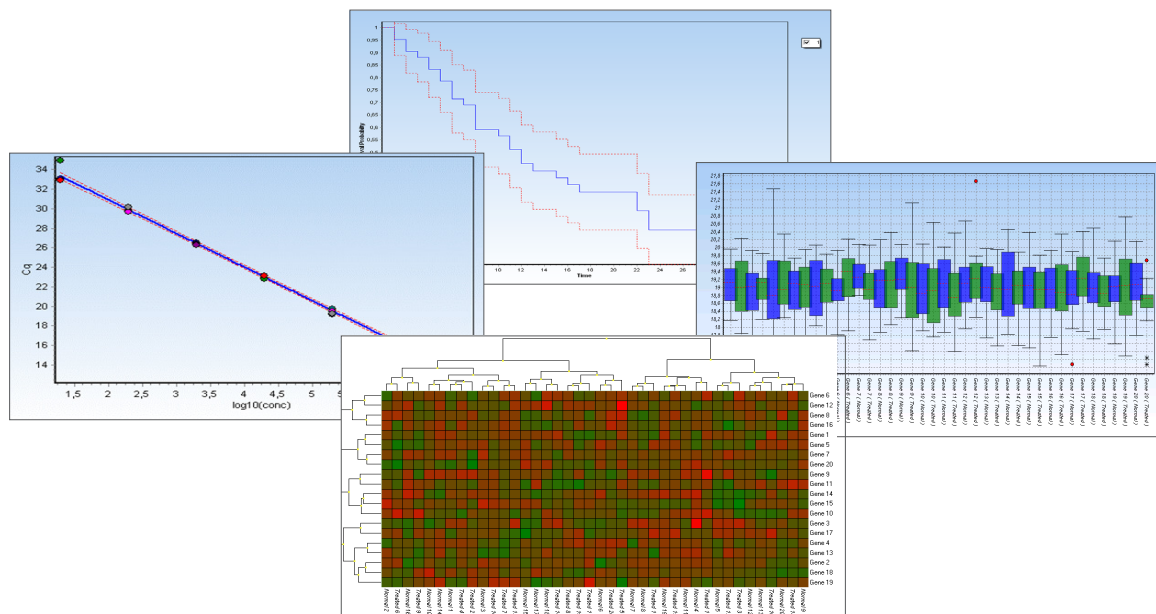
GenEx

qPCR data analysis software

- Easy pre-processing of qPCR raw data
- User friendly interface
- Powerful statistics

The preferred choice

GenEx is the leading software for processing and analysis of qPCR data. The powerful functionalities of GenEx coupled with its user friendly interface and near universal qPCR instrument compatibility makes it the preferred choice for both novices and professionals to cover their data analysis needs.



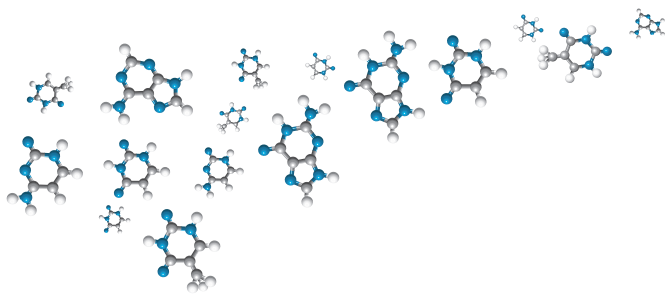
User Reviews:

Dr. Alfred Schöller, CEO, DCWV, Austria

"About three years ago we decided to purchase a site license of GenEx Professional which we use successfully for reference gene determinations and gene expression profiling with our LightCycler 480 instrument. GenEx has been designed by the best real-time PCR experts in the field. Therefore the data flow is perfectly streamlined from the import of the C_p -values, to a complete pre-processing menu and to the sophisticated statistical software. GenEx allows us to go from an Excel data spread sheet to professional publication ready graphic figures within minutes. We recommend GenEx to any laboratory designing real-time PCR assays and users performing gene expression analysis."

Ditte Andreasen, Senior Researcher, Exiqon, Denmark

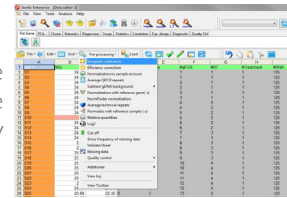
"At Exiqon, we highly recommend using GenEx for qPCR data analysis. The software is easy and intuitive to use, and very comprehensive. It is simple to import and merge data from several runs, and algorithms for reference gene selection are incorporated. Normalization is performed in a series of simple steps, taking all aspects into consideration. After normalization, the software offers very nice statistical analysis tools, so it is really the only analysis software needed. As an added bonus, the GenEx software is affordable, making it a feasible solution for most researchers."



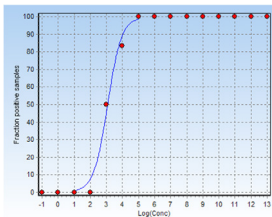
Features:

- **Data Pre-Processing - Merging, normalization, interplate calibration**

GenEx contains excellent and comprehensive tools that help you perform the important data pre-processing steps, such as handling of missing data, reference gene normalization, interplate calibration and efficiency correction, consistently and in the correct order.



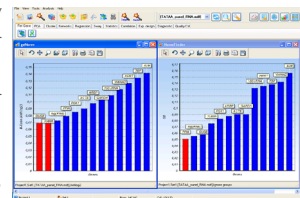
- **Absolute Quantification - Standard curves, reverse regression, LOD, LOQ**



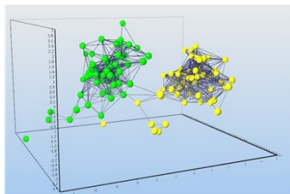
When the exact number of target molecules is needed for quantitative analysis of pathogens or for GMO testing GenEx can be used to construct a standard curve that relates Cq values to concentrations. With reverse regression, absolute quantities including confidence intervals can be estimated for unknown samples from their Cq-values. As complement the sensitivity of a qPCR based analytical procedure can be determined with Limit of Detection (LOD) analysis and Limit of Quantification (LOQ) analysis.

- **Relative Quantification - Reference gene identification, 1-2 way ANOVA, t-test**

GenEx contains powerful tools including geNorm and Normfinder to identify the best reference genes and the optimum number of reference genes for normalization and relative quantification. Once normalized the expression of genes of interest in two groups can be compared with parametric or nonparametric tests for unpaired as well as paired experimental design. When several genes are compared GenEx corrects for multiple testing ambiguity. Several groups can be compared with ANOVA and multifactorial studies are approached with 2-way ANOVA.



- **Expression Profiling - PCA, Hierarchical Clustering, Kohonen Self Organizing Map**



When many genes are analyzed GenEx offers a complete selection of profiling capabilities exemplified by Principal Component Analysis (PCA), Hierarchical Clustering and Kohonen Self Organizing Map (SOM) that exploit the correlation between genes' expressions to classify either samples or genes based on common expression behavior.

- **Multimarker Diagnostics - Artificial Neural Networks, Support Vector Machines**

For molecular diagnostic application state of the art multimarker classification methods that exploit information in reference data are available including powerful Artificial Neural Networks (ANN), Support Vector Machine (SVM) and Potential Curves.

- **Experimental Design - Study design based on variance and budget constrictions**

The key to successful qPCR analysis is arguably quality experimental design that balances statistical significance and experimental cost. Performing a fully nested pilot study GenEx estimates the variance contributions from the different experimental steps, advising you which steps may be improved to enhance data quality and where technical replicates shall be performed. It also indicates the number of subjects needed to achieve a desired resolution. Too few subjects and you may not be able to prove or disprove your hypothesis, while too many subjects may improve resolution beyond what is practically relevant and money is wasted. The GenEx experimental design tools predict optimized designs taking into account budgetary restrictions based on pilot studies or estimated variance contributions.

Contact information and ordering

Please visit www.multid.se to get your own trial version of GenEx. GenEx licenses and a license-USB can be ordered from TATAA Biocenter's distribution partners around the world or in our webshop. Please visit www.tataa.com/products or send an e-mail to order@tataa.com.