

Microarray databases

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GEO, Gene Expression Omnibus

`https://www.ncbi.nlm.nih.gov/geo/`

Gene Expression Omnibus

GEO is a public functional genomics data repository supporting MIAME-compliant data submissions. Array- and sequence-based data are accepted. Tools are provided to help users query and download experiments and curated gene expression profiles.



Keyword or GEO Accession

Getting Started

- Overview
- FAQ
- About GEO DataSets
- About GEO Profiles
- About GEOQR Analysis
- How to Construct a Query
- How to Download Data

Tools

- Search for Studies at GEO DataSets
- Search for Gene Expression at GEO Profiles
- Search GEO Documentation
- Analyze a Study with GEOQR
- GEO BLAST
- Programmatic Access
- FTP Site

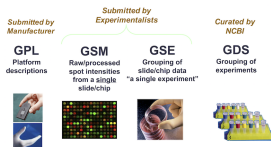
Browse Content

- Repository Browser
- DataSets: 4348
- Series: 73193
- Platforms: 9353
- Samples: 192966

GEO Structure

- **Platform** (GPL) - Annotation the technology and the features
- **Sample** (GSM) - Submitter-supplied sample data
- **Series** (GSE) - A collection of biologically- and statistically-comparable samples processed using the same platform
- **DataSets** (GDS) - Data collections assembled by GEO staff.

GEO Structure



Platform page

<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GPL570>

Platform details:

- Description
- Type
- Organism
- Manufacturer
- Related samples and series

Sample page

https:
[//www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSM543663](https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSM543663)

Sample details:

- Description
- Type
- Organism
- Source
- Related platforms and series

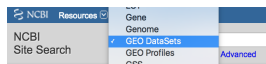
Series page

<https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE21862>

Series details:

- Biological sample summary
- Design summary
- Publication information
- Related platforms and samples

Search DataSet or Gene profile




- Datasets: **experiment-centric** view and analysis
- Gene profiles: **gene-centric** view

<https://www.ncbi.nlm.nih.gov/>

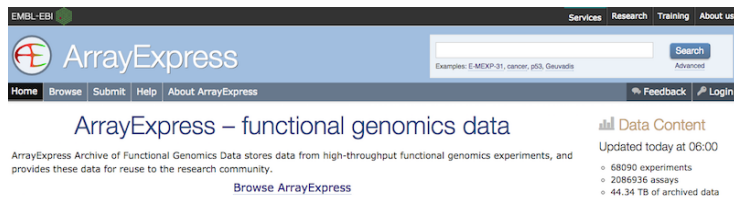
GEO DataSet analysis

<https://www.ncbi.nlm.nih.gov/sites/GDSbrowser?acc=GDS987>

DataSet Record GDS987: Expression Profiles		Data Analysis Tools	Sample Subsets
Title:	Kidney transplant response to calcineurin inhibitor-free immunosuppression using sirolimus		<p>Cluster Analysis</p>  <p>Download</p> <ul style="list-style-type: none">DataSet full SOFT fileDataSet SOFT fileSeries family SOFT fileSeries family MINML fileAnnotation SOFT file
Summary:	Analysis of kidneys from adult renal transplant recipients subjected to calcineurin inhibitor-free immunosuppression using sirolimus. Patients treated with sirolimus have a lower prevalence of chronic allograft nephropathy compared to those treated with cyclosporine, a calcineurin inhibitor.		
Organism:	<i>Homo sapiens</i>		
Platform:	GPL96: [HG-U133A] Affymetrix Human Genome U133A Array		
Citation:	Fiachner SM, Kurian SM, Solez K, Cook DJ et al. De novo kidney transplantation without use of calcineurin inhibitors preserves renal structure and function at two years. <i>Am J Transplant</i> 2004 Nov;4(11):1776-85. PMID: 15476476		
Reference Series:	GSE1743	Sample count: 41	
Value type:	count	Series published: 2004/09/23	

Data Analysis Tools	
Find genes <input type="checkbox"/>	<input type="text" value="Find gene name or symbol:"/> <input type="button" value="Go"/>
<input type="button" value="Compare 2 sets of samples"/>	<input type="checkbox"/> <input type="checkbox"/> agent <input type="button" value="Go"/>
<input type="button" value="Cluster heatmaps"/>	Find genes that are up/down for this condition(s):
<input type="button" value="Experiment design and value distribution"/>	

`https://www.ebi.ac.uk/arrayexpress/`



The screenshot shows the ArrayExpress website homepage. At the top, there is a navigation bar with links for "Services", "Research", "Training", and "About us". Below this is the ArrayExpress logo and a search bar with a "Search" button. The search bar contains the text "Examples: E-MEXP-31, cancer, p53, Geuvadis". Below the search bar is another navigation bar with links for "Home", "Browse", "Submit", "Help", "About ArrayExpress", "Feedback", and "Login". The main content area features the heading "ArrayExpress – functional genomics data" and a sub-heading "ArrayExpress Archive of Functional Genomics Data stores data from high-throughput functional genomics experiments, and provides these data for reuse to the research community." Below this is a link "Browse ArrayExpress". To the right, there is a section titled "Data Content" with a bar chart icon, stating "Updated today at 06:00" and listing statistics: "68090 experiments", "2086936 assays", and "44.34 TB of archived data".

... and more

`https://en.wikipedia.org/wiki/Microarray_databases,`

`https://datamed.org/`