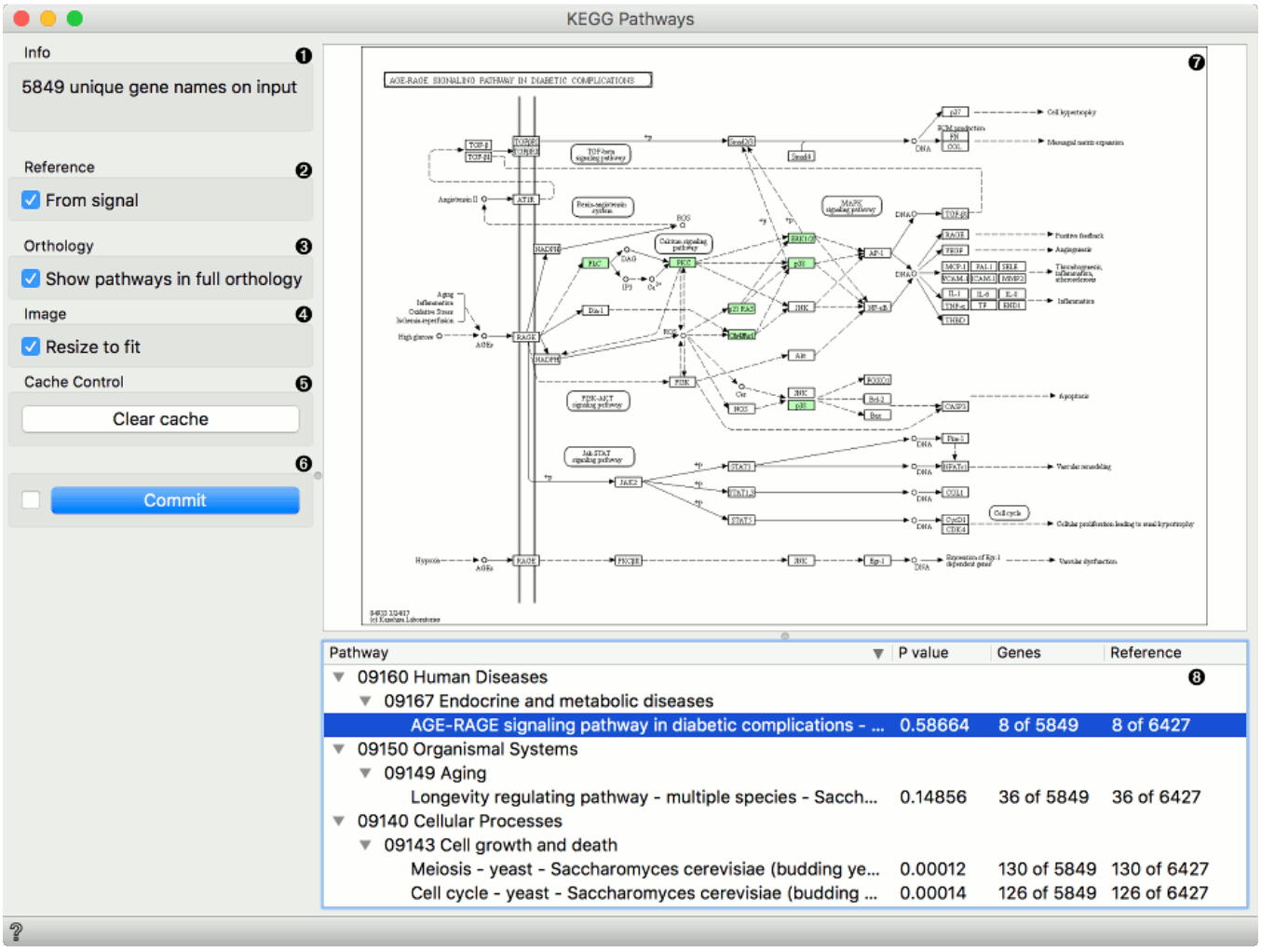
KEGG Pathways

Diagrams of molecular interactions, reactions, and relations.

Inputs - Data: Data set. - Reference: Referential data set.

Outputs - Selected Data: Data subset. - Unselected Data: Remaining data.

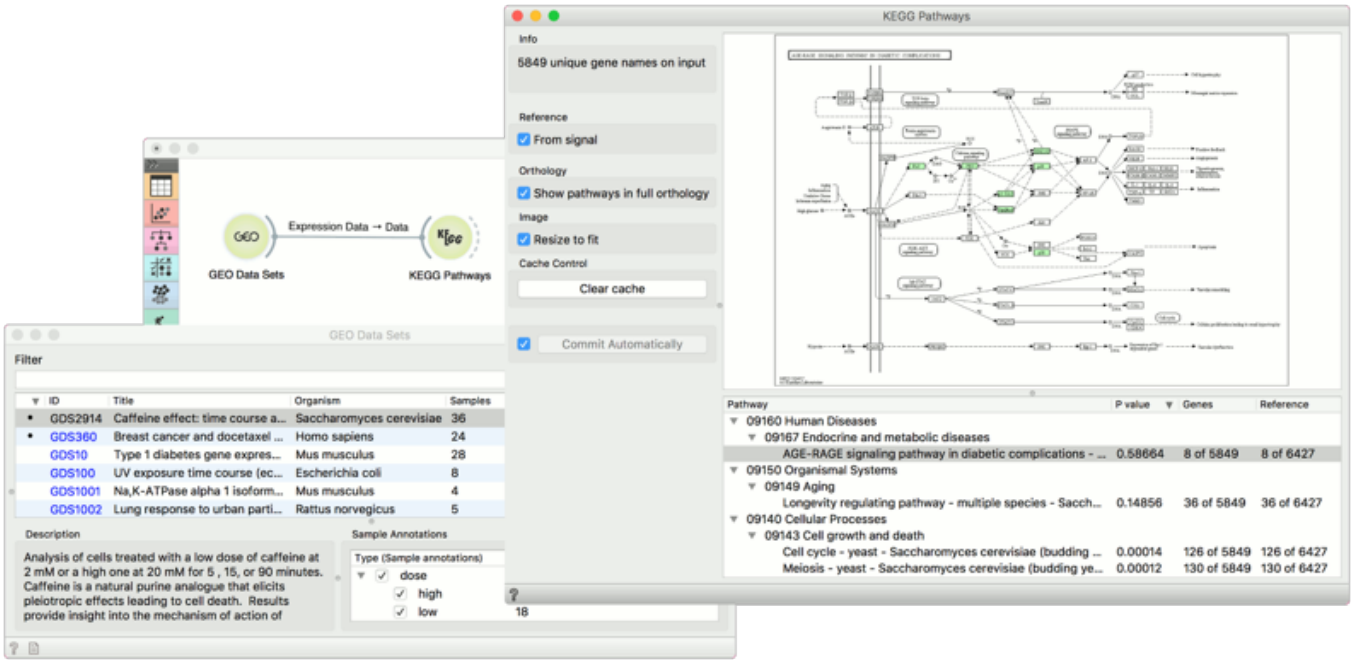
KEGG Pathways widget displays diagrams of molecular interactions, reactions and relations from the KEGG Pathways Database. It takes data on gene expression as an input, matches the genes to the biological processes and displays a list of corresponding pathways. To explore the pathway, the user can click on any process from the list or arrange them by P-value to get the most relevant processes at the top.



1. Information on the input genes.
2. If you have a separate reference set in the input, tick *From signal* to use these data as reference.
3. To have pathways listed and displayed by vertical descent, tick *Show pathways in full orthology*.
4. To fit the image to screen, tick *Resize to fit*. Untick the box if you wish to explore the pathways.
5. To clear all locally cached KEGG data, press *Clear cache*.
6. When *Auto commit is on*, the widget will automatically apply the changes. Alternatively press *Commit*.
7. A list of pathways either as processes or in full orthology. Click on the process to display the pathway. You can sort the data by P-value to get the most relevant results at the top.

Example

This simple example shows how to visualize interactions with **KEGG Pathways**. We have loaded the *Caffeine effect: time courses and dose response* (GDS2914) data with the **GEO Data Sets** widget. Then we have observed the pathways in **KEGG Pathways**. We have used reference from signal and selected *AGE-RAGE signaling pathway in diabetic complications*.


KEGG Pathways
Info
5849 unique gene names on input
Reference
From signal
Orthology
Show pathways in full orthology
Image
Resize to fit
Cache Control
Clear cache
Commit Automatically
Expression Data → Data
GEO Data Sets
KEGG Pathways
GEO Data Sets
Filter
ID Title Organism Samples
GDS2914 Caffeine effect: time course a... Saccharomyces cerevisiae 36
GDS360 Breast cancer and docetaxel ... Homo sapiens 24
GDS10 Type 1 diabetes gene expres... Mus musculus 28
GDS100 UV exposure time course (ec... Escherichia coli 8
GDS1001 Na,K-ATPase alpha 1 isoform... Mus musculus 4
GDS1002 Lung response to urban parti... Rattus norvegicus 5
Description
Analysis of cells treated with a low dose of caffeine at 2 mM or a high one at 20 mM for 5 , 15, or 90 minutes. Caffeine is a natural purine analogue that elicits pleiotropic effects leading to cell death. Results provide insight into the mechanism of action of
Sample Annotations
Type (Sample annotations)
dose
high
low
18
Pathway P value Genes Reference
09160 Human Diseases
09167 Endocrine and metabolic diseases
AGE-RAGE signaling pathway in diabetic complications - ... 0.58664 8 of 5849 8 of 6427
09150 Organismal Systems
09149 Aging
Longevity regulating pathway - multiple species - Sacch... 0.14856 36 of 5849 36 of 6427
09140 Cellular Processes
09143 Cell growth and death
Cell cycle - yeast - Saccharomyces cerevisiae (budding ... 0.00014 126 of 5849 126 of 6427
Meiosis - yeast - Saccharomyces cerevisiae (budding ye... 0.00012 130 of 5849 130 of 6427