

# Performing pathway enrichment

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Before performing pathway enrichment, we need to create a gene list from the ANOVA results.

## Creating a list of significant genes

- Select **Gene Expression** from the workflows drop-down menu
- Select the **ANOVAResults gene** spreadsheet
- Select **Create Gene List** from the *Analysis* section of the *Gene Expression* workflow
- Select **Brain vs. Heart** from the *List Manager* dialog (Figure 1) leaving the other options as defaults
- Select **Create**

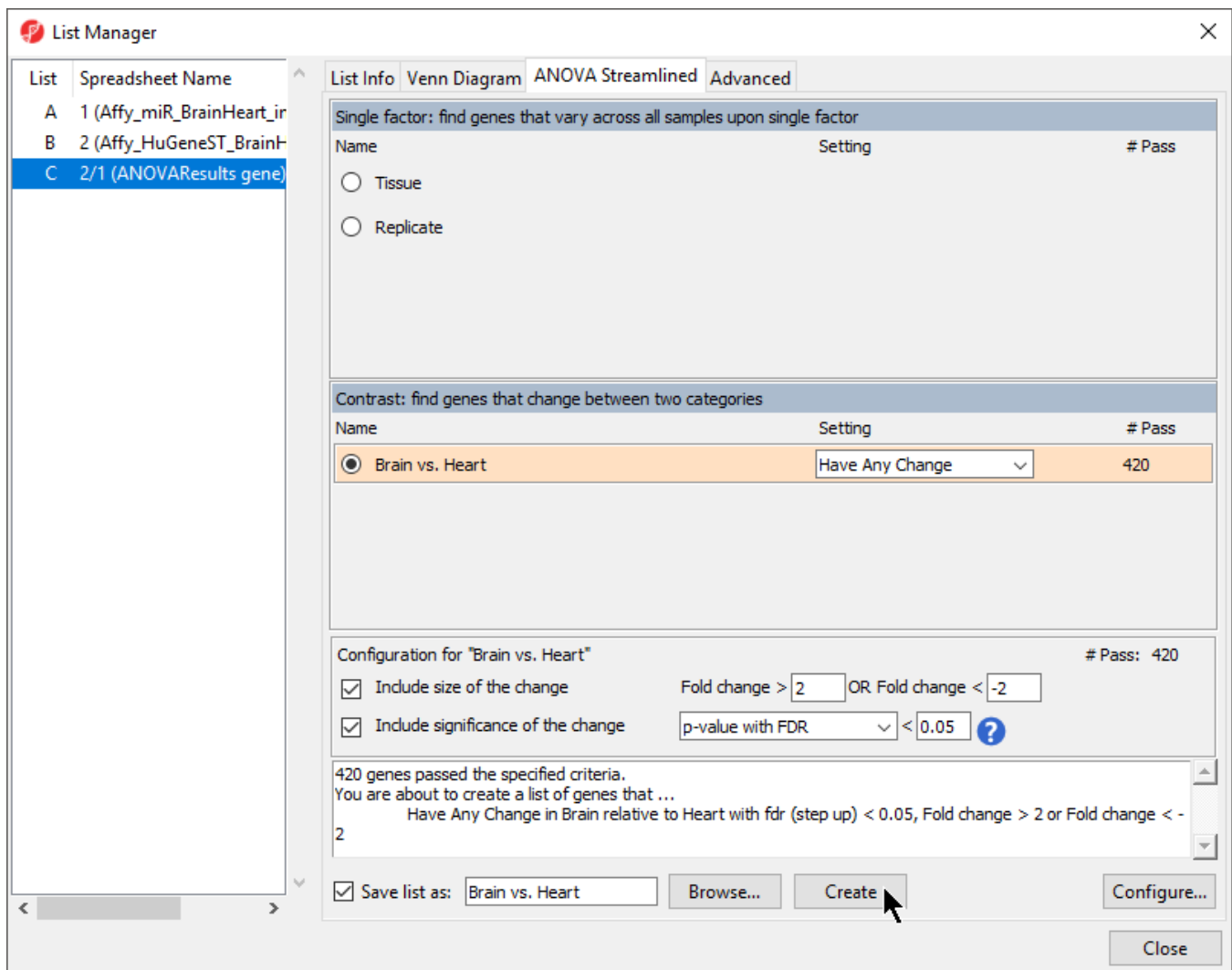


Figure 3. Configuring the list manager dialog

A new list of 420 genes will be created as a child spreadsheet of *1 (ANOVAResults gene)*.

- Select **Close** to exit the *List Manager* dialog

## Performing pathway enrichment analysis

- Select the new gene list, *Brain vs. Heart*
- Select **Pathway Analysis** from the *Biological Interpretation* section of the *Gene Expression* workflow
- Select **Next >** to continue with *Pathway Enrichment*

*Pathway Enrichment* is the only option available for a gene list. To learn more about the other option, *Pathway ANOVA*, see the [Gene Ontology ANOVA](#) tutorial, which follows the same procedure as *Pathway ANOVA*.

- Select **Next >** to continue with the *Brain vs. Heart* spreadsheet
- Select **Next >** to continue with default settings for Fisher's Exact test
- Select **Next >** to continue with *Homo sapiens* and *4. Gene Symbol* as parameters

Partek Pathway will now open. If this is your first time using Partek Pathway on the selected species, Partek Pathway will automatically download the KEGG information needed for the analysis. Once the pathway enrichment calculation has been performed, a new spreadsheet, *Pathway-Enrichment.txt*, will be added as a child spreadsheet of *Brain vs. Heart* and Partek Pathway will launch (Figure 2).

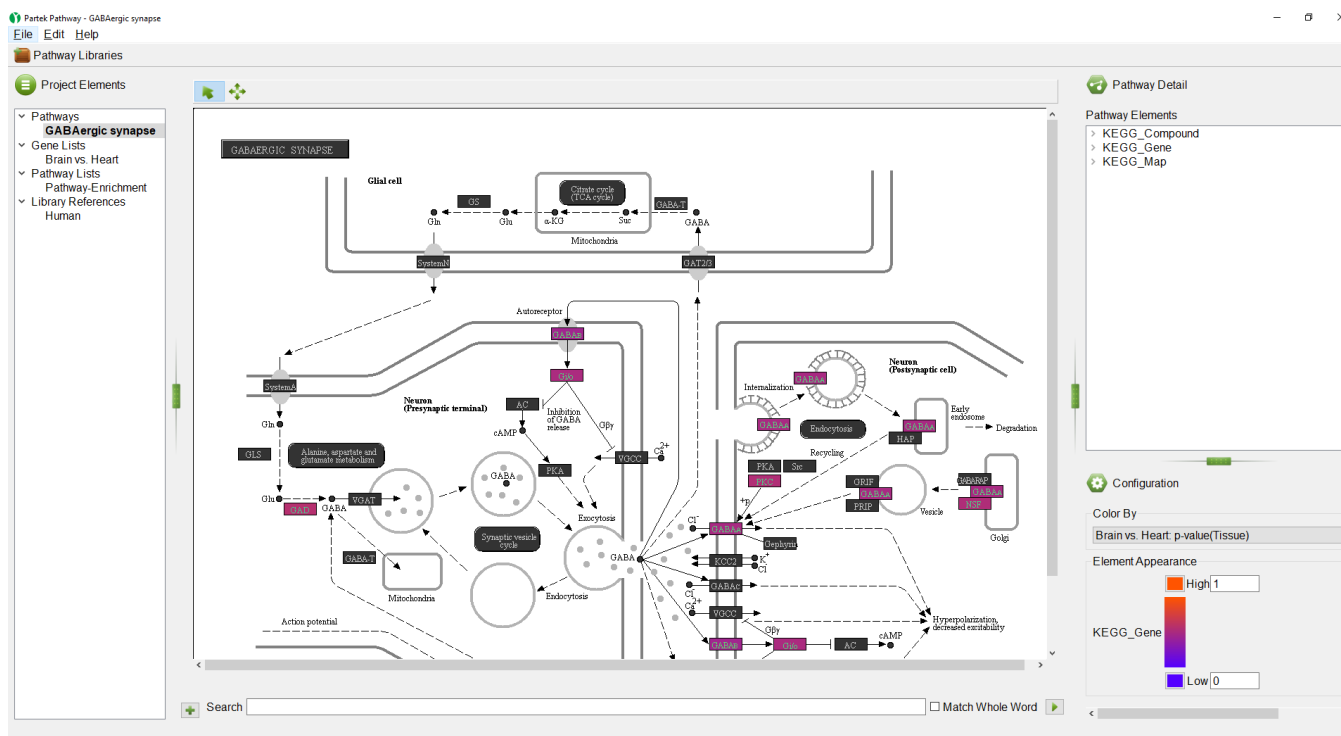


Figure 4. Partek Pathway displaying the most significantly enriched pathway from the gene list

The pathway currently displayed has the highest enrichment score. Both Partek Genomics Suite and Partek Pathway offer options for analyzing the results of pathway enrichment analysis. The next two sections of the user guide will show the options for analyzing the results of pathway enrichment in each program.

« [Partek Pathway](#) [Analyzing pathway enrichment in Partek Genomics Suite](#) »

## Additional Assistance

If you need additional assistance, please visit [our support page](#) to submit a help ticket or find phone numbers for regional support.



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