Performing hierarchical clustering

The gene list in spreadsheet *Down_Syndrome_vs_Normal (A)* can be used for hierarchical clustering to visualize patterns in the data.

- Under the *Visualization* section in the *Gene Expression* workflow, select **Cluster Based on Significant Genes**

The *Cluster Significant Genes* dialog asks you to specify the type of clustering you want to perform.

- Choose **Hierarchical Clustering** and select **OK**
- Choose the **Down_Syndrome_vs_Normal (A)** spreadsheet under the *Spreadsheet with differentially expressed genes*
- Choose the **Standardize – shift genes to mean of zero and scale to standard deviation of one** under the *Expression normalization* panel (Figure 1)

This option will adjust all the gene intensities such that the mean is zero and the standard deviation is 1.
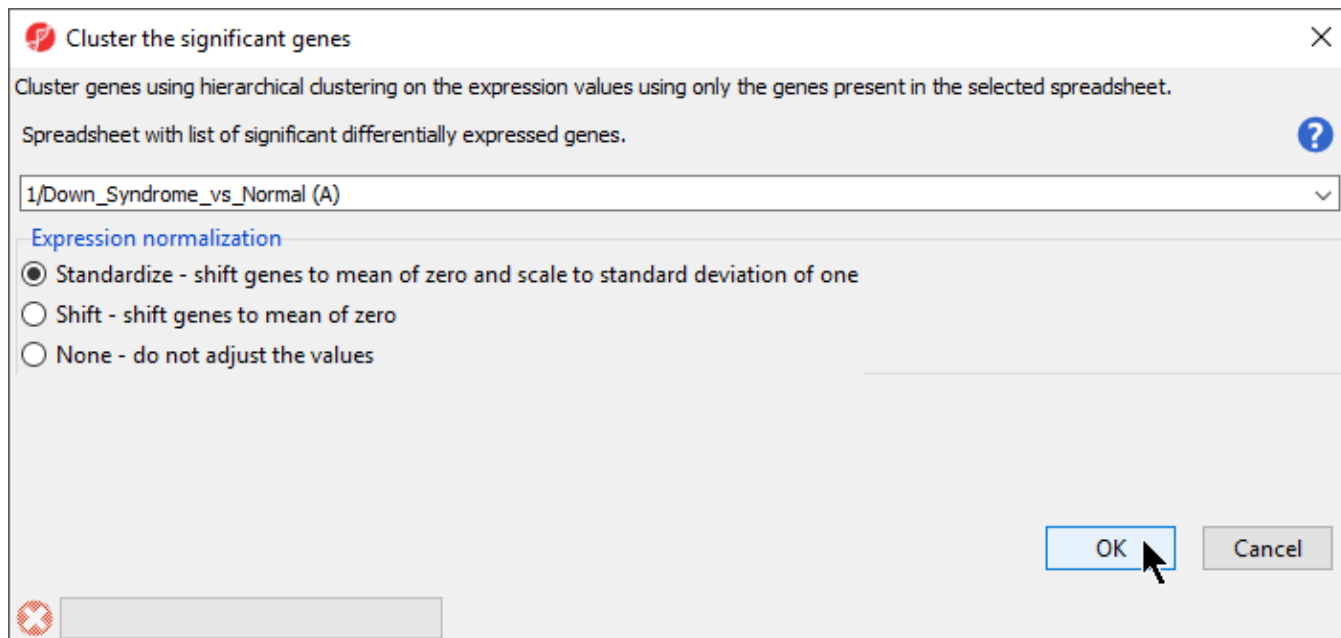

Figure 1. Configuring Hierarchical Clustering

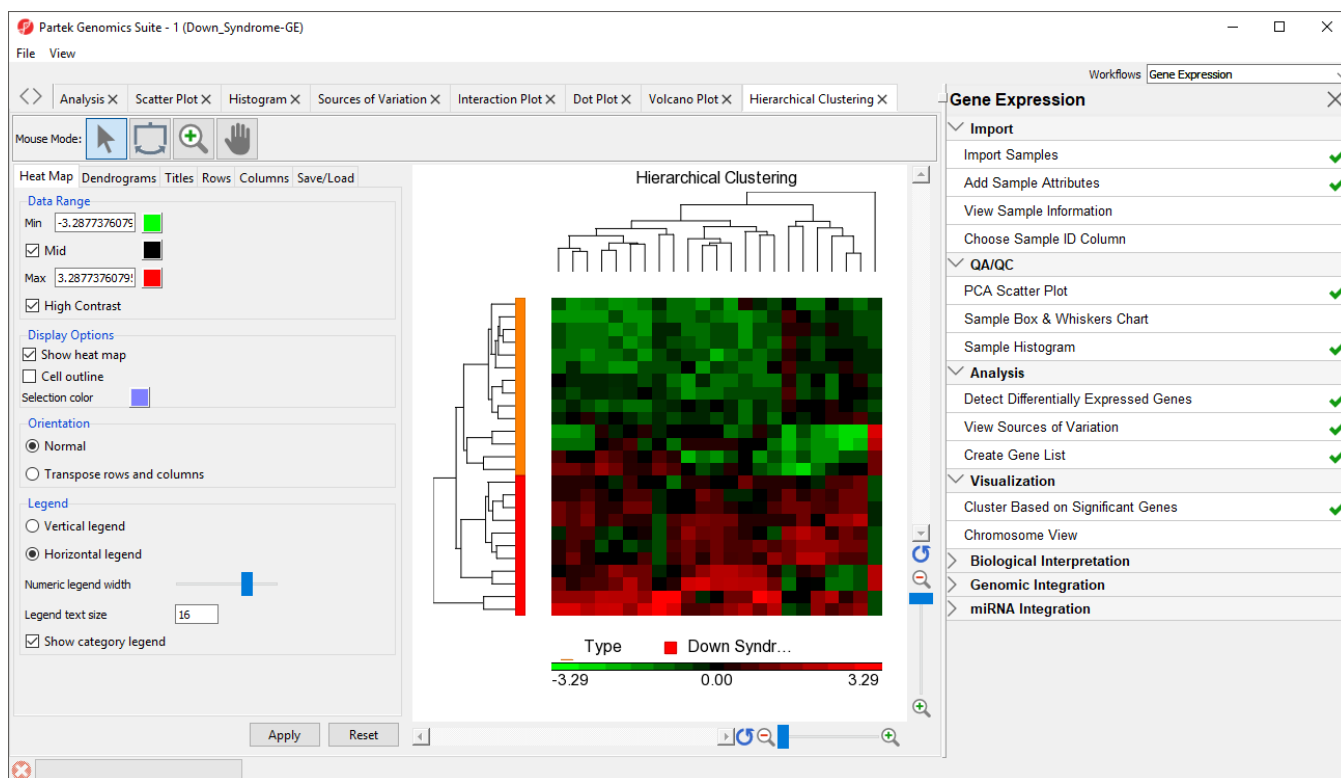- Select **OK** to generate a *Hierarchical Clustering* tab (Figure 2)

Figure 2. Hierarchical Clustering of Down_Syndrome_vs_Normal (A)

The graph (Figure 2) illustrates the standardized gene expression level of each gene in each sample. Each gene is represented in one column, and each sample is represented in one row. Genes with no difference in expression have a value of zero and are colored black. Genes with increased expression in Down syndrome samples have positive values and are colored red. Genes with reduced expression in Down syndrome samples have negative values and are colored green. Down syndrome samples are colored red and normal samples are colored orange. On the left-hand side of the graph, we can see that the Down syndrome samples cluster together.

For more information on the methods used for clustering, you can refer to **Chapter 8: Hierarchical & Partitioning Clustering** in **Help > User's Manual**. For a tutorial on configuring the clustering plot, please refer to Hierarchical Clustering Analysis.

« Creating gene lists from ANOVA results   Adding gene annotations »

Additional Assistance

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

Your Rating: ☆☆☆☆☆   Results: ★★★★⯪ 36 rates