

Figure 1 displays a multi-panel plot showing gene expression data for the "cluser1" gene set. The x-axis represents the Gene List Index, ranging from 0 to 17996 (total genes in list) and 115 (genes in the set).

The top panel shows the log<sub>2</sub>(RPKM) expression level (y-axis, ranging from -1.3 to 0.3) plotted against the Gene List Index. A blue line represents the expression profile, which decreases from index 0 to a minimum around index 13806 and then increases. A green vertical dashed line marks the "Zero crossing at 8335", and a blue vertical dashed line marks the "Peak at 13806".

The middle panel displays a barcode visualization of gene expression levels, showing vertical lines representing individual genes across the index.

The bottom panel shows the proportion of genes in the "cluser1" (green area) and "NON.cluser1" (red area) sets across the Gene List Index. The "cluser1" proportion is high at the start (index 0) and decreases towards the end, while the "NON.cluser1" proportion is low at the start and increases towards the end.

A density plot showing the probability density function (P(ES)) of Enrichment Scores (ES) for two gene sets. The x-axis represents ES values from -1.0 to 1.0, and the y-axis represents P(ES) from 0.0 to 2.0. A red curve represents the 'Gene Set Null Density', which is bimodal with peaks at approximately -0.5 and 0.4. A vertical black line at ES = -0.669 represents the 'Observed Gene Set ES value'. The area to the left of this line is labeled 'Neg. ES "NON.clus1"' and the area to the right is labeled 'Pos. ES: "clus1"'. Below the x-axis, the following text is displayed: ES = -0.669 NES = -1.5 Nom. p-val= 0.0179 FWER= 0.852 FDR= 0.169.

Heatmap visualization showing the expression of 100 genes across 100 samples. The genes are listed on the y-axis, grouped into two clusters: **clus1** (red background) and **NON.clus1** (blue background). The samples are listed on the x-axis. The heatmap shows varying levels of expression for each gene across the samples, with a clear separation between the two clusters.

**clus1**

**NON.clus1**

Gene list (y-axis):

- HLA-DPA1
- HLA-DPA2
- HLA-DPA3
- HLA-DPA4
- HLA-DPA5
- HLA-DPA6
- HLA-DPA7
- HLA-DPA8
- HLA-DPA9
- HLA-DPA10
- HLA-DPA11
- HLA-DPA12
- HLA-DPA13
- HLA-DPA14
- HLA-DPA15
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- HLA-DPA94
- HLA-DPA95
- HLA-DPA96
- HLA-DPA97
- HLA-DPA98
- HLA-DPA99
- HLA-DPA100

Sample list (x-axis):

- HLA-DPA1
- HLA-DPA2
- HLA-DPA3
- HLA-DPA4
- HLA-DPA5
- HLA-DPA6
- HLA-DPA7
- HLA-DPA8
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- HLA-DPA10
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