

Figure 1 displays the distribution of gene lists, showing the number of genes in the list (x-axis) versus the number of genes in the gene set (y-axis). The x-axis is labeled "Gene List Index" and ranges from 0 to 18,315. The y-axis is labeled "Number of genes: 18315 (in list), 114 (in gene set)".

The plot shows a red curve representing the distribution of gene lists. The curve starts at 0, rises sharply to a peak at 3874, and then gradually declines, crossing the zero line at 9679. A vertical dotted line marks the peak at 3874, and a vertical dotted line marks the zero crossing at 9679. A horizontal dashed line is drawn at the zero level.

The plot also includes a barcode representation of the gene lists, showing the distribution of gene lists across the index. The barcode consists of vertical lines of varying heights, representing the number of genes in each list. The barcode is divided into two regions: "clus2" (left) and "NON.clus2" (right), separated by a vertical dotted line at 9679.

A density plot showing the distribution of ES values for two gene sets. The x-axis is labeled 'ES' and ranges from -0.6 to 0.6. The y-axis is labeled 'P(ES)' and ranges from 0.0 to 2.5. A red curve represents the 'Gene Set Null Density', which is bimodal with peaks around -0.3 and 0.25. A vertical black line at ES = 0.511 represents the 'Observed Gene Set ES value'. The area to the left of this line is labeled 'Neg. ES "NON.clus2"' and the area to the right is labeled 'Pos. ES: "clus2"'. Below the x-axis, the following statistics are provided: ES = 0.511 NES = 1.61 Nom. p-val= 0.037 FWER= 0.914 FDR= 0.224.

Heatmap visualization showing gene expression patterns across 100 samples. The samples are grouped into two main clusters: **clus2** (left, 50 samples) and **NON.clus2** (right, 50 samples). The color scale ranges from 0 (blue) to 1 (red), indicating expression levels. The genes listed on the y-axis are grouped into several functional categories, including cell cycle, DNA replication, and cell growth. The heatmap shows distinct expression patterns for each cluster, with clus2 generally showing higher expression levels for genes involved in cell cycle and DNA replication, while NON.clus2 shows higher expression levels for genes involved in cell growth and differentiation.

clus2 **NON.clus2**

Genes (Y-axis):

- CCNA1
- CCNB1
- CCND1
- CCNE1
- CCNE2
- CCNE3
- CCNE4
- CCNE5
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