

Figure 1 displays a multi-panel plot illustrating the distribution of gene lists across clusters, specifically focusing on the "clus4" and "NON.clus4" clusters.

The X-axis represents the **Gene List Index**, ranging from 0 to 17,728 (total number of genes in the list) and 91 (number of genes in the gene set).

The top panel shows the **Number of gene lists** (Y-axis) plotted against the Gene List Index. The curve (red line) starts at 0, rises sharply to a peak at index 3637, and then gradually declines, crossing the zero line at index 10017.

The middle panel displays a **Barcode** visualization, where vertical lines represent individual gene lists. The density of lines is highest near the peak (index 3637) and decreases towards the zero crossing (index 10017).

The bottom panel shows the **Distribution of gene lists** (Y-axis) across clusters. The area under the curve (green fill) represents the distribution. The distribution is heavily skewed towards the "clus4" cluster (left side, index 0 to 3637) and shows a sharp drop-off near the zero crossing (index 10017), indicating a high concentration of gene lists within the "clus4" cluster.

ES = 0.541 NES = 1.83 Nom. p-val= 0 FWER= 0.438 FDR= 0.0648

Heatmap visualization showing gene expression profiles across two clusters: **clus4** (red background) and **NON.clus4** (blue background). The y-axis lists genes, and the x-axis represents individual samples. The color scale at the bottom indicates expression levels from -2 (blue) to 2 (red).

Genes listed on the y-axis (from top to bottom):

- Class
- MAPK10
- CACNA1C
- MBP2
- PLA2G5S
- ADCT19
- PLA2G4
- PLCB4
- PRKX
- ADCT4
- ITPR3
- ITPR3
- ADCT5
- PLA2G2A
- PRKG3
- PLCB2
- MAPK11
- ADCT77
- MAPK12
- ITPR1
- HELO
- PLD1
- MAPK7
- CACNA1F
- PLA2G10
- PLD2
- CAMK2B
- CACNA1D
- GRIK1
- CAMK2A
- CACNA1E
- MAPK9
- SGP1
- MAP3K1
- ADCT11
- PLCB3
- GRIK6
- MAP3K2
- MAPK13
- PLA2G12A
- MAPK3
- MAP2K1
- CALM2
- CALM1
- CALM3
- KRAS1
- GNA11
- ADCT9
- PRKCA
- SOS2
- PLA2G10
- MAP3K3
- JUN
- CDC42
- GNA15
- ATF4
- MAPK9
- LHB
- MAPK6
- CAMK2G
- ADCT6
- GNAQ
- MAP2K2
- PRKCD
- HRAS
- PTK2B
- PRKACB
- ADCT8
- ADCT8
- MAPK1
- SOS1
- CALM1
- ELK1
- PLA2G6
- GRB2
- MAPK14
- NRAS
- MAP3K7
- MAP3K4
- GJA
- PLA2G1B
- PTK2
- PRKCA
- ITPR2
- PLA2G12B
- CALM1E
- MAP2K6

Color scale at the bottom: -2 (blue) to 2 (red).