

Figure 1 displays a multi-panel plot showing the distribution of genes in the *clus3* cluster. The x-axis represents the Gene List Index (0 to 18,646) and the Number of genes (18,646 in list, 65 in gene set).

The top panel shows the difference in log-odds ratio (red line) across the gene list index. The y-axis ranges from -0.4 to 0.5. The red line starts near 0, rises to a peak of approximately 0.4 at index 2777, and then gradually declines, crossing zero at index 10,679. A horizontal dashed line is at y=0. Vertical dotted lines mark the peak at 2777 (red) and the zero crossing at 10,679 (green).

The middle panel shows vertical black lines representing genes, with a dense cluster of lines between index 0 and 2,777, and a sparser distribution thereafter.

The bottom panel shows the distribution of genes (green area plot). The y-axis ranges from -1.0 to -0.4. The area is labeled "clus3" on the left and "NON.clus3" on the right, indicating the distribution of genes in the *clus3* cluster versus those not in the cluster.

A density plot showing the distribution of ES values for the 'NON.clus3' gene set. 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 to 4. The plot features a red curve representing the 'Gene Set Null Density' and a vertical black line at ES = 0.361 representing the 'Observed Gene Set ES value'. The distribution is bimodal, with peaks at approximately -0.25 and 0.25. The observed value is located on the right-hand peak. Text labels on the x-axis indicate 'Neg. ES "NON.clus3"' for negative values and 'Pos. ES: "clus3"' for positive values. At the bottom, statistical results are provided: ES = 0.361, NES = 1.29, Nom. p-val = 0.104, FWER = 0.978, and FDR = 0.94.

Heatmap visualization showing gene expression profiles across 100 samples, categorized into two groups: **clus3** (left) and **NON.clus3** (right). The y-axis lists 100 genes, and the x-axis lists 100 samples. The color scale ranges from -2 (blue) to 2 (red).

**Gene List (Y-axis):**

- Class
- PRKCO
- POMC
- PCK1
- PPARGC1A
- IRS2
- IRS4
- CPT1C
- MAPK10
- NPY
- TNF
- AGRP
- IRS1
- PRKAA2
- SLC2A1
- MAPK8
- SLC2A4
- MAPK9
- GGPC
- CPT1B
- NFKBIE
- CAMKK1
- AKT3
- TRAF2
- PRKAB1
- PRKAG2
- TNFRSF1A
- AKT2
- ADIPOR2
- IKKBK
- PRKAA1
- MTOR
- LEPR
- RXR8
- STAT3
- RXR4
- CAMKK2
- AKT1
- ACSL3
- NFKB1
- SOCS3
- PTPN11
- PPARA
- RELA
- ACSL4
- CHUK
- NFKBIA
- TRAFD
- ACACB
- IKBK
- NFKBIB
- CPT1A
- ACSL6
- PRKAB2
- JAK2
- PCK2
- ADIPOR1
- STK11
- PRKAG1
- TNFRSF1B
- ADIPO
- RXR9
- CD36
- ACSL5
- ACSL1
- LEP

**Sample List (X-axis):**

- TGGA\_NG\_A8R0\_01
- TGGA\_NG\_A8R1\_01
- TGGA\_NG\_A8R2\_01
- TGGA\_NG\_A8R3\_01
- TGGA\_NG\_A8R4\_01
- TGGA\_NG\_A8R5\_01
- TGGA\_NG\_A8R6\_01
- TGGA\_NG\_A8R7\_01
- TGGA\_NG\_A8R8\_01
- TGGA\_NG\_A8R9\_01
- TGGA\_NG\_A8R10\_01
- TGGA\_NG\_A8R11\_01
- TGGA\_NG\_A8R12\_01
- TGGA\_NG\_A8R13\_01
- TGGA\_NG\_A8R14\_01
- TGGA\_NG\_A8R15\_01
- TGGA\_NG\_A8R16\_01
- TGGA\_NG\_A8R17\_01
- TGGA\_NG\_A8R18\_01
- TGGA\_NG\_A8R19\_01
- TGGA\_NG\_A8R20\_01
- TGGA\_NG\_A8R21\_01
- TGGA\_NG\_A8R22\_01
- TGGA\_NG\_A8R23\_01
- TGGA\_NG\_A8R24\_01
- TGGA\_NG\_A8R25\_01
- TGGA\_NG\_A8R26\_01
- TGGA\_NG\_A8R27\_01
- TGGA\_NG\_A8R28\_01
- TGGA\_NG\_A8R29\_01
- TGGA\_NG\_A8R30\_01
- TGGA\_NG\_A8R31\_01
- TGGA\_NG\_A8R32\_01
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- TGGA\_NG\_A8R96\_01
- TGGA\_NG\_A8R97\_01
- TGGA\_NG\_A8R98\_01
- TGGA\_NG\_A8R99\_01
- TGGA\_NG\_A8R100\_01