

Figure 1 displays a multi-panel plot showing gene set analysis results. The top panel is a line graph of the Gene Set Enrichment Score (y-axis, ranging from -1 to 1) against the Gene List Index (x-axis, ranging from 0 to 17824). The blue line shows a sharp dip to approximately -0.8 at index 8765 (marked by a green dashed line) and a subsequent rise to a peak of approximately 0.8 at index 11611 (marked by a blue dotted line). The middle panel shows vertical black bars representing the Number of genes in the set (y-axis, ranging from 0 to 32) against the Gene List Index (x-axis, ranging from 0 to 17824). The bars are concentrated between indices 8765 and 11611. The bottom panel is a green area plot showing the Number of genes in the set (y-axis, ranging from 0 to 32) against the Gene List Index (x-axis, ranging from 0 to 17824). The area is mostly flat at 0, with a small peak at index 8765 and a larger peak at index 11611. Labels "clus3" and "NON.clus3" are present at the bottom left and right respectively.

ES = -0.483 NES = -1.58 Nom. p-val = 0.043 FWER = 0.733 FDR = 0.28

Heatmap showing gene expression profiles for 25 genes across 48 samples. The samples are grouped into two clusters: **clus3** (red bar) and **NON.clus3** (blue bar). The genes are listed on the y-axis, and the samples are listed on the x-axis. The color scale ranges from -2 (blue) to 2 (red).

**Genes (Y-axis):** Class, GAS2, CYCS, TNFRSF10B, TRAF2, SPTAN1, XIAP, CASP7, BCL2, REL, BIRC2, DFFA, FADD, CASP6, RIPK1, APAF1, CHUK, CASP9, TRADD, NFKB1, LMNA, NFKBIA, CASP8, CASP3, CFLAR, MAP3K14, DFFB, TNFSF10, BIRC3, TNFSF12, CASP10, TNFRSF25, TNFRSF10A.

**Samples (X-axis):** TCGA\_AL\_1326\_01, TCGA\_AL\_1328\_01, TCGA\_AL\_1329\_01, TCGA\_AL\_1330\_01, TCGA\_AL\_1335\_01, TCGA\_AL\_1336\_01, TCGA\_AL\_1337\_01, TCGA\_AL\_1338\_01, TCGA\_AL\_1340\_01, TCGA\_MN\_1440\_01, TCGA\_MN\_1441\_01, TCGA\_MN\_1421\_01, TCGA\_MN\_1428\_01, TCGA\_MN\_1429\_01, TCGA\_MN\_1430\_01, TCGA\_MN\_1438\_01, TCGA\_MN\_1440\_01, TCGA\_AL\_1325\_01, TCGA\_AL\_1326\_01, TCGA\_AL\_1327\_01, TCGA\_AL\_1331\_01, TCGA\_AL\_1332\_01, TCGA\_AL\_1333\_01, TCGA\_AL\_1334\_01, TCGA\_AL\_1335\_01, TCGA\_AL\_1343\_01, TCGA\_AL\_1345\_01, TCGA\_AL\_1346\_01, TCGA\_MN\_1441\_01, TCGA\_MN\_1442\_01, TCGA\_MN\_1447\_01, TCGA\_MN\_1476\_01, TCGA\_MN\_1477\_01, TCGA\_MN\_1479\_01, TCGA\_MN\_1482\_01, TCGA\_MN\_1483\_01, TCGA\_MN\_1484\_01, TCGA\_MN\_1485\_01, TCGA\_MN\_1486\_01, TCGA\_MN\_1487\_01, TCGA\_MN\_1488\_01, TCGA\_MN\_1489\_01, TCGA\_MN\_1490\_01, TCGA\_MN\_1491\_01, TCGA\_MN\_1492\_01, TCGA\_MN\_1493\_01, TCGA\_MN\_1494\_01, TCGA\_MN\_1495\_01, TCGA\_MN\_1496\_01, TCGA\_MN\_1497\_01, TCGA\_MN\_1498\_01, TCGA\_MN\_1499\_01, TCGA\_MN\_1500\_01, TCGA\_MN\_1501\_01, TCGA\_MN\_1502\_01, TCGA\_MN\_1503\_01, TCGA\_MN\_1504\_01, TCGA\_MN\_1505\_01, TCGA\_MN\_1506\_01, TCGA\_MN\_1507\_01, TCGA\_MN\_1508\_01, TCGA\_MN\_1509\_01, TCGA\_MN\_1510\_01, TCGA\_MN\_1511\_01, TCGA\_MN\_1512\_01, TCGA\_MN\_1513\_01, TCGA\_MN\_1514\_01, TCGA\_MN\_1515\_01, TCGA\_MN\_1516\_01, TCGA\_MN\_1517\_01.