

Figure 1 displays the distribution of genes in the *clus4* gene set. The plot shows the number of genes in the *clus4* set (blue line) versus the Gene List Index (0 to 17,824). The blue line starts at approximately 17,824, decreases to a minimum of about 55 at index 15,401, and then increases sharply to about 17,824 at index 17,824. A vertical green dashed line marks the zero crossing at index 9,125. A vertical blue dashed line marks the peak at index 15,401. The bottom panel shows the distribution of genes in the *clus4* set (green area) versus the Gene List Index. The area is labeled "clus4" and "NON.clus4". The number of genes in the *clus4* set is 17,824 (in list), 55 (in gene set).

A density plot showing the probability density function (PDF) of ES values. The x-axis is labeled 'ES' and ranges from approximately -0.8 to 0.8. The y-axis is labeled 'P(ES)' and ranges from 0 to 4. A red curve represents the 'Gene Set Null Density', which is bimodal with peaks at approximately -0.3 (height ~2.8) and 0.35 (height ~2.0). A vertical black line at ES = -0.565 represents the 'Observed Gene Set ES value'. The area under the red curve to the left of this line is shaded in light blue. Text labels on the x-axis indicate 'Neg. ES "NON.clus4"' for the left tail and 'Pos. ES: "clus4"' for the right tail. At the bottom, summary statistics are provided: ES = -0.565, NES = -1.46, Nom. p-val = 0.0131, FWER = 0.921, and FDR = 1.

ES = -0.565 NES = -1.46 Nom. p-val = 0.0131 FWER = 0.921 FDR = 1

clus4 **NON.clus4**

Class
 CLCA2
 PRKG1
 OR52N4
 GNAL
 ADCY3
 CNGA4
 PRKX
 CAMK2A
 CAMK2G
 OR3A2
 PRKG2
 OR13A1
 PRKACG
 OR2W3
 OR7D2
 OR2C1
 ADRB2C
 OR2A25
 OR2A1
 CALM2
 CALML6
 OR5K2
 PRKACB
 CALM1
 PRKACA
 OR56B4
 ARRB2
 OR51E1
 GLUC1B
 OR1Q1
 CAMK2D
 OR5A2
 PDE1C
 OR6T1
 OR1J2
 OR1J1
 CALM3
 CALML3
 OR51E2
 OR2A4
 OR2A7
 OR2A5
 OR2A14
 GUCY2D
 OR51T1
 OR1B1
 OR1N2
 OR5B12
 OR10AD1
 OR52R1
 OR13JH
 CAMK2B
 OR1L8
 CNGB1
 OR1N1

TCGA.AL.3333.01
 TCGA.AL.3334.01
 TCGA.AL.3335.01
 TCGA.AL.3336.01
 TCGA.AL.3337.01
 TCGA.AL.3338.01
 TCGA.AL.3339.01
 TCGA.AL.3340.01
 TCGA.AL.3341.01
 TCGA.AL.3342.01
 TCGA.AL.3343.01
 TCGA.AL.3344.01
 TCGA.AL.3345.01
 TCGA.AL.3346.01
 TCGA.AL.3347.01
 TCGA.AL.3348.01
 TCGA.AL.3349.01
 TCGA.AL.3350.01
 TCGA.AL.3351.01
 TCGA.AL.3352.01
 TCGA.AL.3353.01
 TCGA.AL.3354.01
 TCGA.AL.3355.01
 TCGA.AL.3356.01
 TCGA.AL.3357.01
 TCGA.AL.3358.01
 TCGA.AL.3359.01
 TCGA.AL.3360.01
 TCGA.AL.3361.01
 TCGA.AL.3362.01
 TCGA.AL.3363.01
 TCGA.AL.3364.01
 TCGA.AL.3365.01
 TCGA.AL.3366.01
 TCGA.AL.3367.01
 TCGA.AL.3368.01
 TCGA.AL.3369.01
 TCGA.AL.3370.01
 TCGA.AL.3371.01
 TCGA.AL.3372.01
 TCGA.AL.3373.01
 TCGA.AL.3374.01
 TCGA.AL.3375.01
 TCGA.AL.3376.01
 TCGA.AL.3377.01
 TCGA.AL.3378.01
 TCGA.AL.3379.01
 TCGA.AL.3380.01
 TCGA.AL.3381.01
 TCGA.AL.3382.01
 TCGA.AL.3383.01
 TCGA.AL.3384.01
 TCGA.AL.3385.01
 TCGA.AL.3386.01
 TCGA.AL.3387.01
 TCGA.AL.3388.01
 TCGA.AL.3389.01
 TCGA.AL.3390.01
 TCGA.AL.3391.01
 TCGA.AL.3392.01
 TCGA.AL.3393.01
 TCGA.AL.3394.01
 TCGA.AL.3395.01
 TCGA.AL.3396.01
 TCGA.AL.3397.01
 TCGA.AL.3398.01
 TCGA.AL.3399.01
 TCGA.AL.3400.01
 TCGA.AL.3401.01
 TCGA.AL.3402.01
 TCGA.AL.3403.01
 TCGA.AL.3404.01
 TCGA.AL.3405.01
 TCGA.AL.3406.01
 TCGA.AL.3407.01
 TCGA.AL.3408.01
 TCGA.AL.3409.01
 TCGA.AL.3410.01
 TCGA.AL.3411.01
 TCGA.AL.3412.01
 TCGA.AL.3413.01
 TCGA.AL.3414.01
 TCGA.AL.3415.01
 TCGA.AL.3416.01