

A density plot showing the distribution of ES values. 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 3.0. A red curve represents the 'Gene Set Null Density', which is bimodal with peaks at approximately -0.25 and 0.3. A vertical black line represents the 'Observed Gene Set ES value' at approximately 0.44. The area under the red curve to the left of the observed value is shaded light red. Text labels on the x-axis indicate 'Neg. ES "NON.clus3"' for the left peak and 'Pos. ES: "clus3"' for the right peak. At the bottom, statistical values are provided: ES = 0.444, NES = 1.41, Nom. p-val = 0.0688, FWER = 0.967, and FDR = 0.624.

Heatmap visualization showing gene expression profiles across two clusters: **clus3** (red header) and **NON.clus3** (blue header). The y-axis lists 100 genes, and the x-axis represents individual samples. The color scale ranges from red (high expression) to blue (low expression).

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

- Clus3
- BMP7
- BMP5
- ZFP5
- GDF7
- BMP4
- SMAD9
- ID1
- SMAD9
- TGF $\beta$ 2
- ID1
- BMP2
- COMP
- BMP6
- INHBC
- GDF5
- THBS4
- PTX2
- BMP1A
- ZFYVE9
- NCOL
- INHBC
- INHBC
- SMAD7
- SMAD7
- CHRD
- ACV2A
- SMAD5
- ACV2B
- SMAD5
- AMH
- ZFYVE14
- INHA
- BMP8B
- BMP2
- TGF $\beta$ 3
- ID4
- BMP1B
- AMHR2
- PPP2R1B
- BMP1A
- RPS3A1
- THBS3
- ESL2
- LEFTY2
- ROCK
- PPP2R1A
- GREM1
- SPI1
- SMAD2
- MYC
- SMURF1
- ZFP4
- ROCK2
- SMURF2
- SMAD4
- TGF $\beta$ 1
- SKP1
- PPP2R1A
- ESL2
- LEFTY1
- ACV1
- CUL1
- RPS2A
- RPS6KE2
- MAPK1
- SMAD1
- TGF $\beta$ 1
- MAPK1
- REX1
- ACVR1C
- THBS1
- ACVRL1
- REX1
- ROCK1
- ROCK1
- TGF $\beta$ 2
- LTBP1
- TGF $\beta$ 2
- THBS1
- CDKN2B
- PI3K