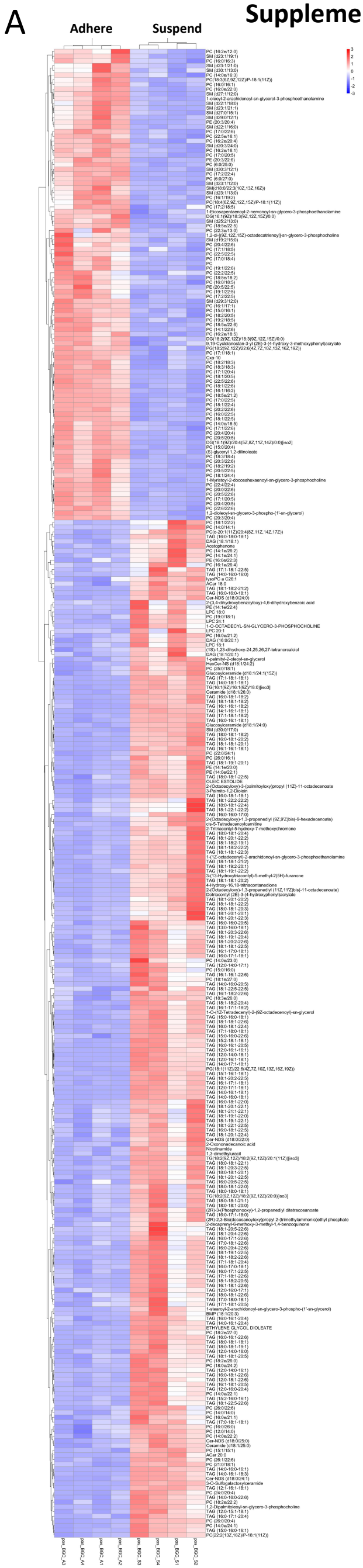
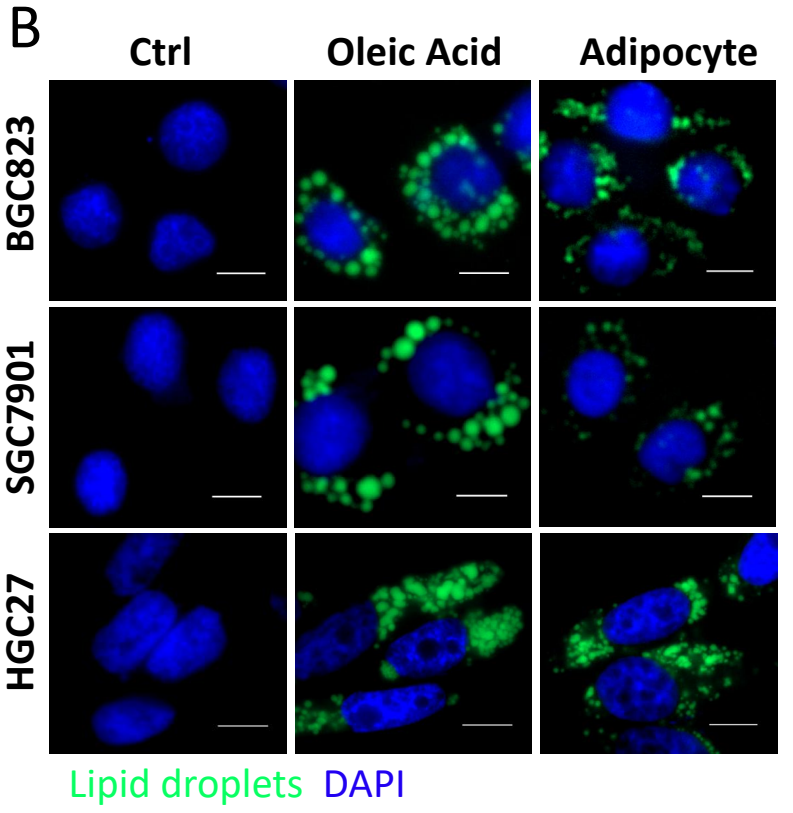
Supplementary Figure 1 The role of lipids drolets in ferroptosis induced by RSL3 in GC cells. **A** Heatmap of the spatial distribution of PUFAs in various lipid contents of cells cultured with attachment and detachment analyzed by lipid mass spectrometry. **B** BODIPY 493/503 imaging of neutral lipid accumulation (green) in GC cells treated with OA (200 μM) or co-culture with adipocytes. Cell nuclei were stained with DAPI. Scale bars 10 μm. **C** Cell viability assessment of indicated GC cells cultured alone or with adipocytes and treated with RSL3 for 24 h. **D** Cell viability assessment of indicated GC cells treated with AA (20μM) and OA (200 μM) for 24 h under attached conditions. Data are mean ± SD of at least three replicates from two independent experiments. P values were determined by a two-tailed t-test.

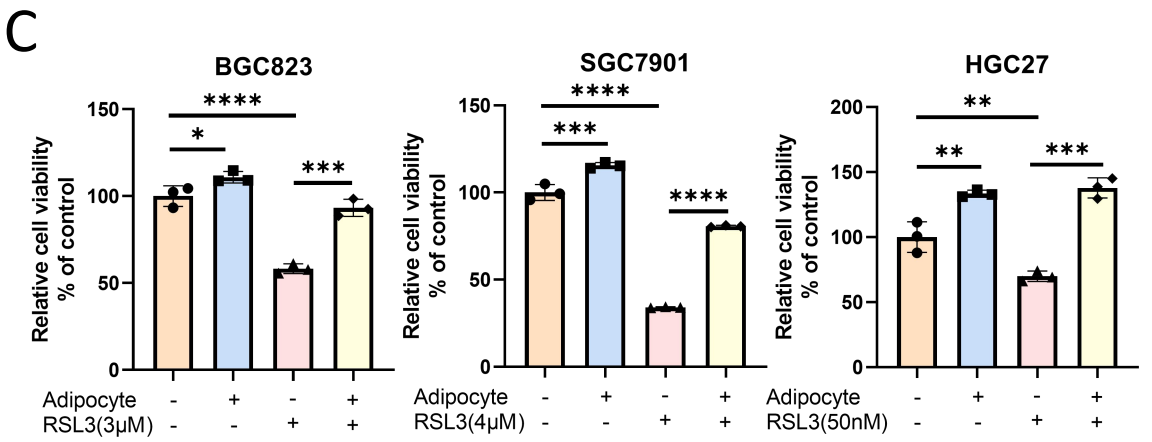
Supplementary Figure 2 GSEA analysis of the activation and expression of gene pathways in cancer tissues from patients with high and low GPD1/1L expression **(A, B).**

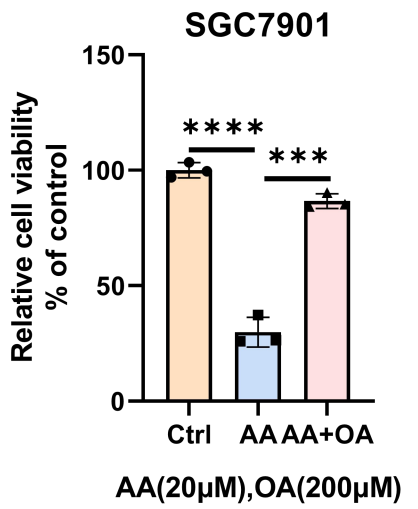
Supplementary Figure 3 The effect of lipid droplets on FSP1. **A** Western blot analysis of FSP1 and GPX4 expression in GC cells co-cultured with adipocytes for 24 h. **B** Western blot analysis of FSP1, GPD1 and GPD1L expression in GPD1/1L knockout GC cells treated with OA (200μM) for 12 h and 24 h.

Supplementary Figure 1



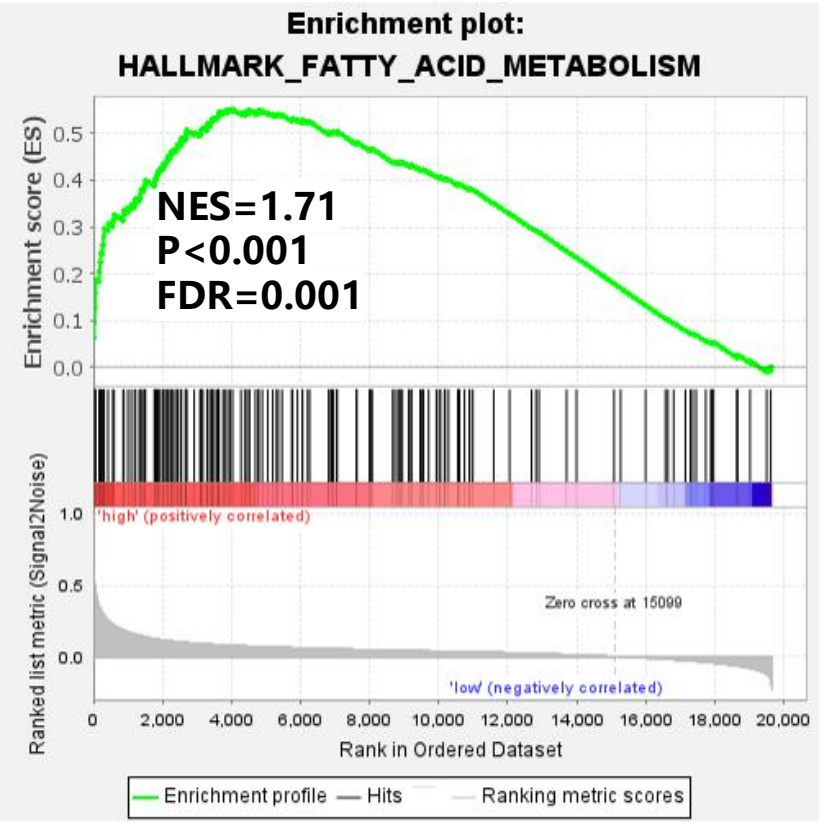






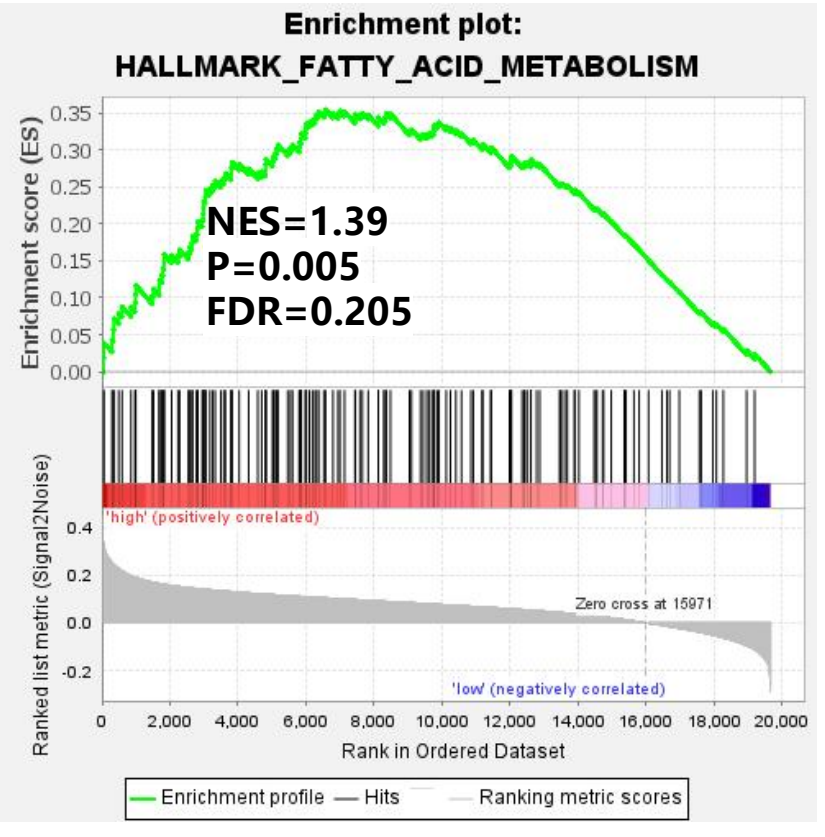
Supplementary Figure 2

A



Rank gene list, GPD1 up verse down

B



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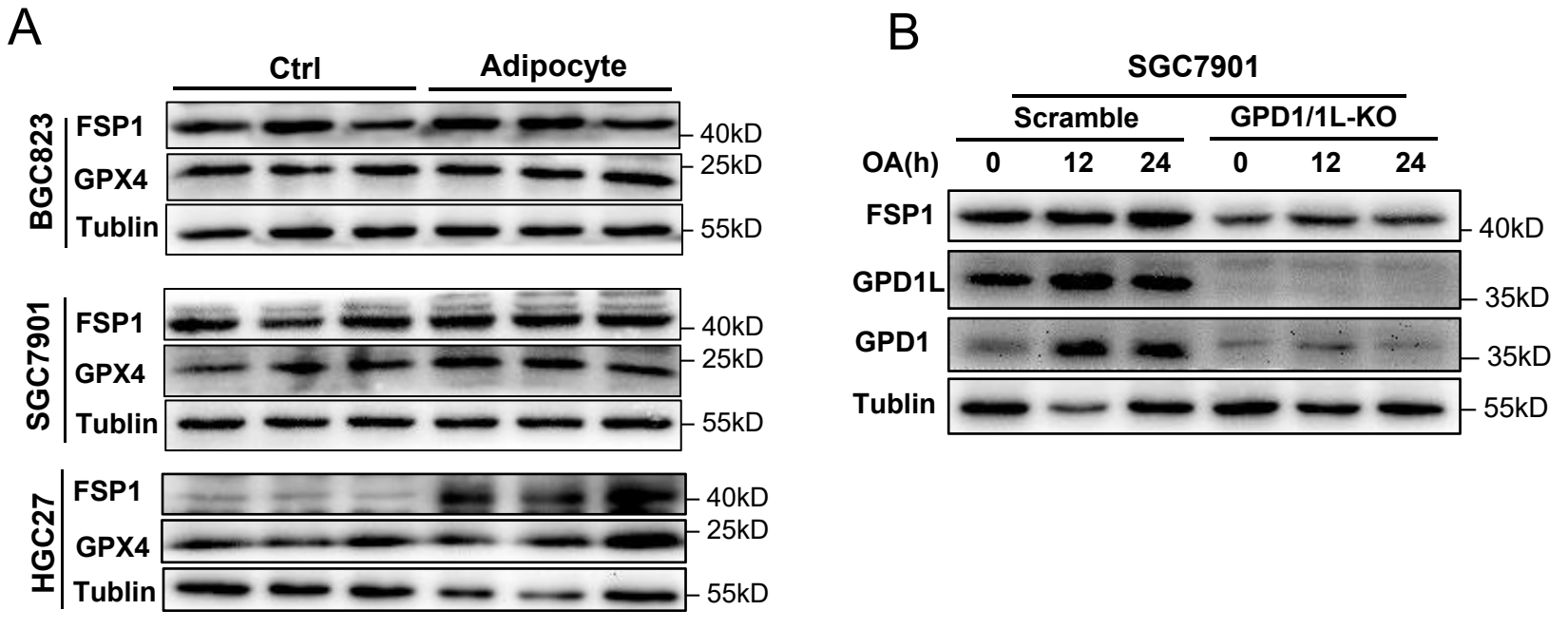
Supplementary Figure 3