Figure S1 A flowchart shows the design and analysis of this study. T2D, Type 2 diabetes; DEGs, differentially expressed genes; LASSO, Least absolute shrinkage and selection operator; ROC, Receiver Operating Characteristic; GSVA, Gene set variation analysis.
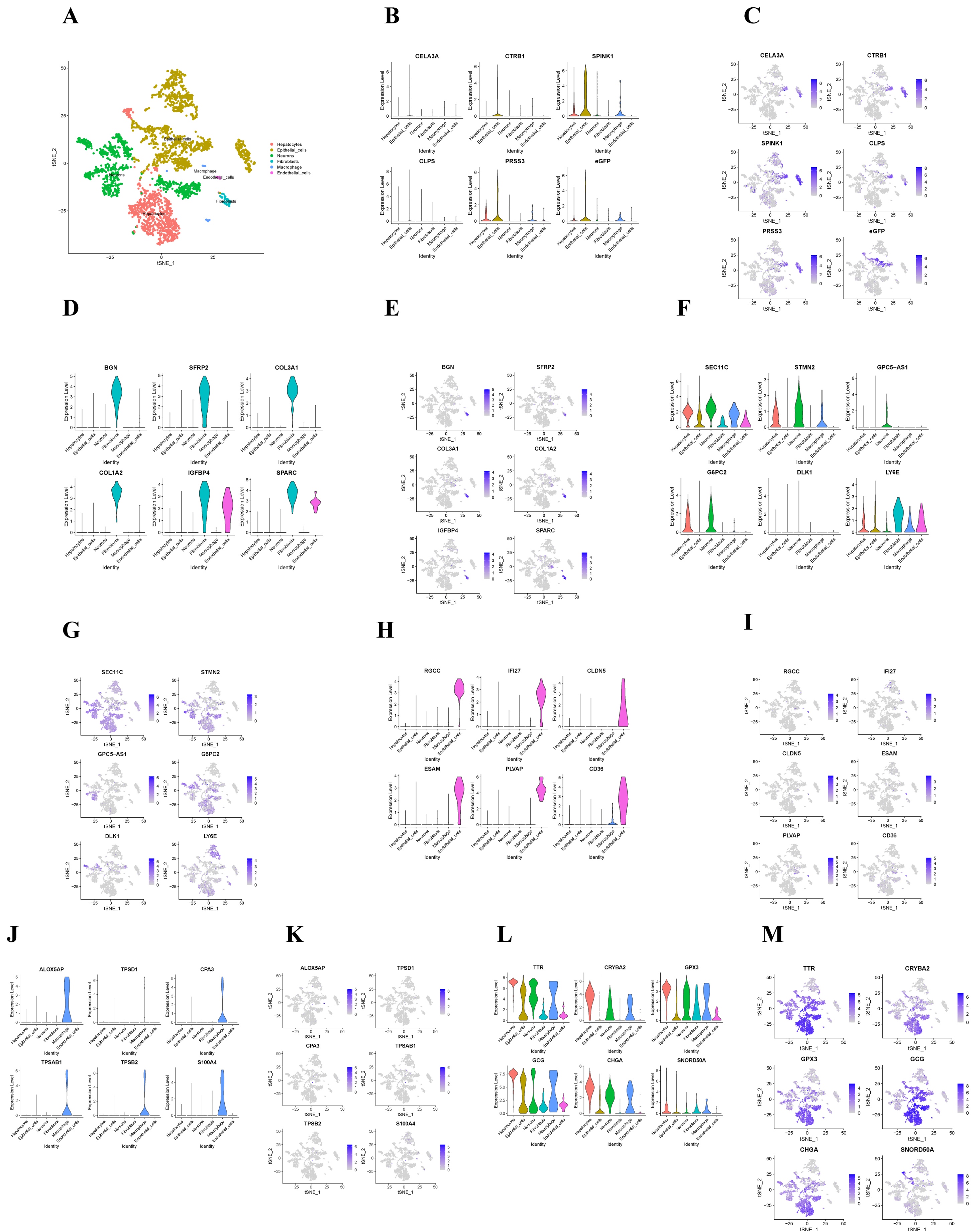
Figure S2 Cell clusters were annotated according to cell-type markers (A). Expression levels of marker genes in 6 cell types expressed in violin and scatter plots (B-M).
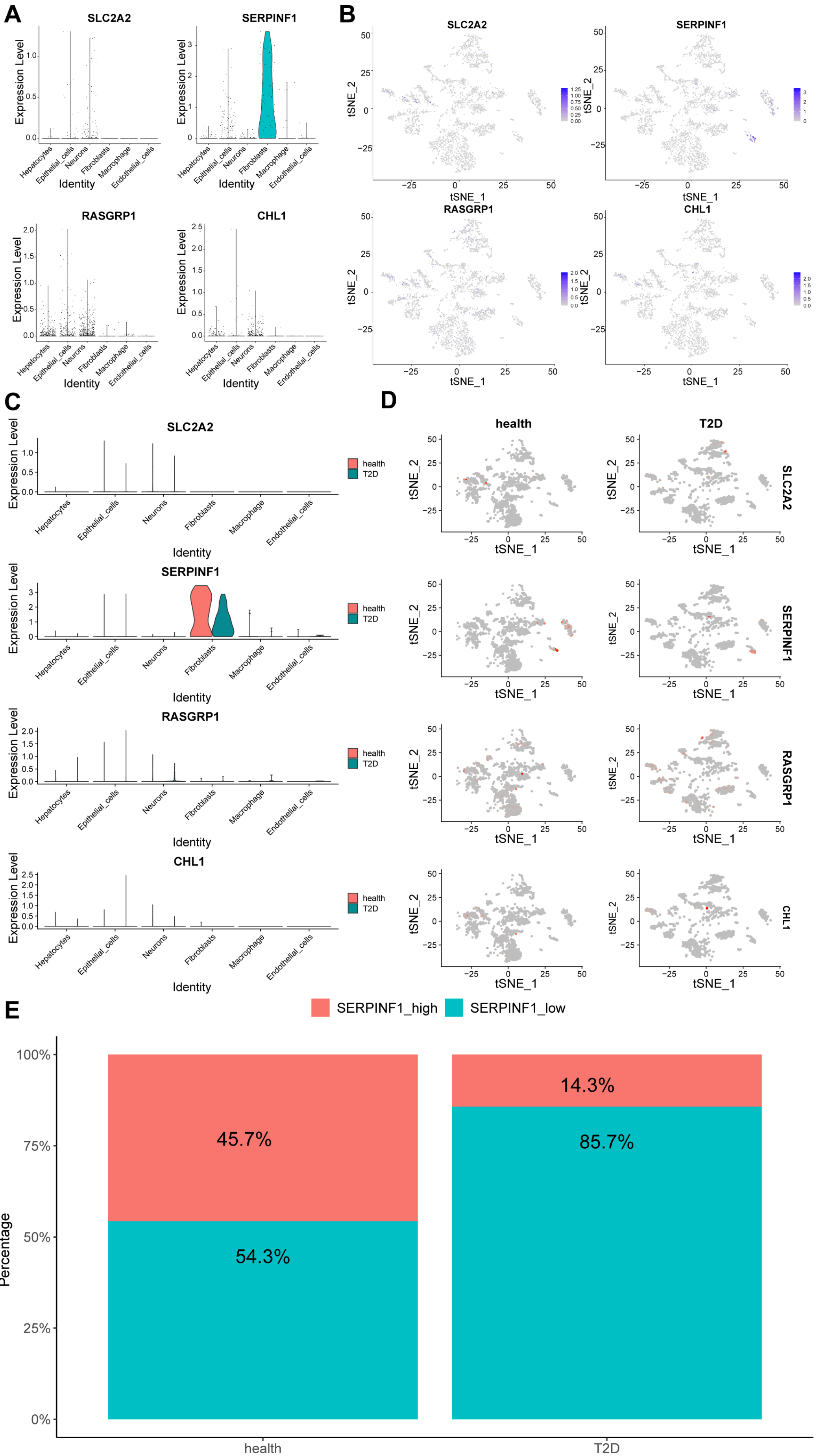
Figure S3 Violin plots of diagnostic biomarker expression in single-cell datasets (A); scatter plot of expression of diagnostic biomarkers in single-cell datasets (B); violin plot of expression of diagnostic genes in normal and T2D patients in different cell groups (C); scatter plot showing the diagnostic genes of normal and T2D patients in different cell groups (D); the percentage difference between high and low expression of *SERPINF1* in Fibroblasts cells between disease and control Stacked graph (E). T2D, Type 2 diabetes.