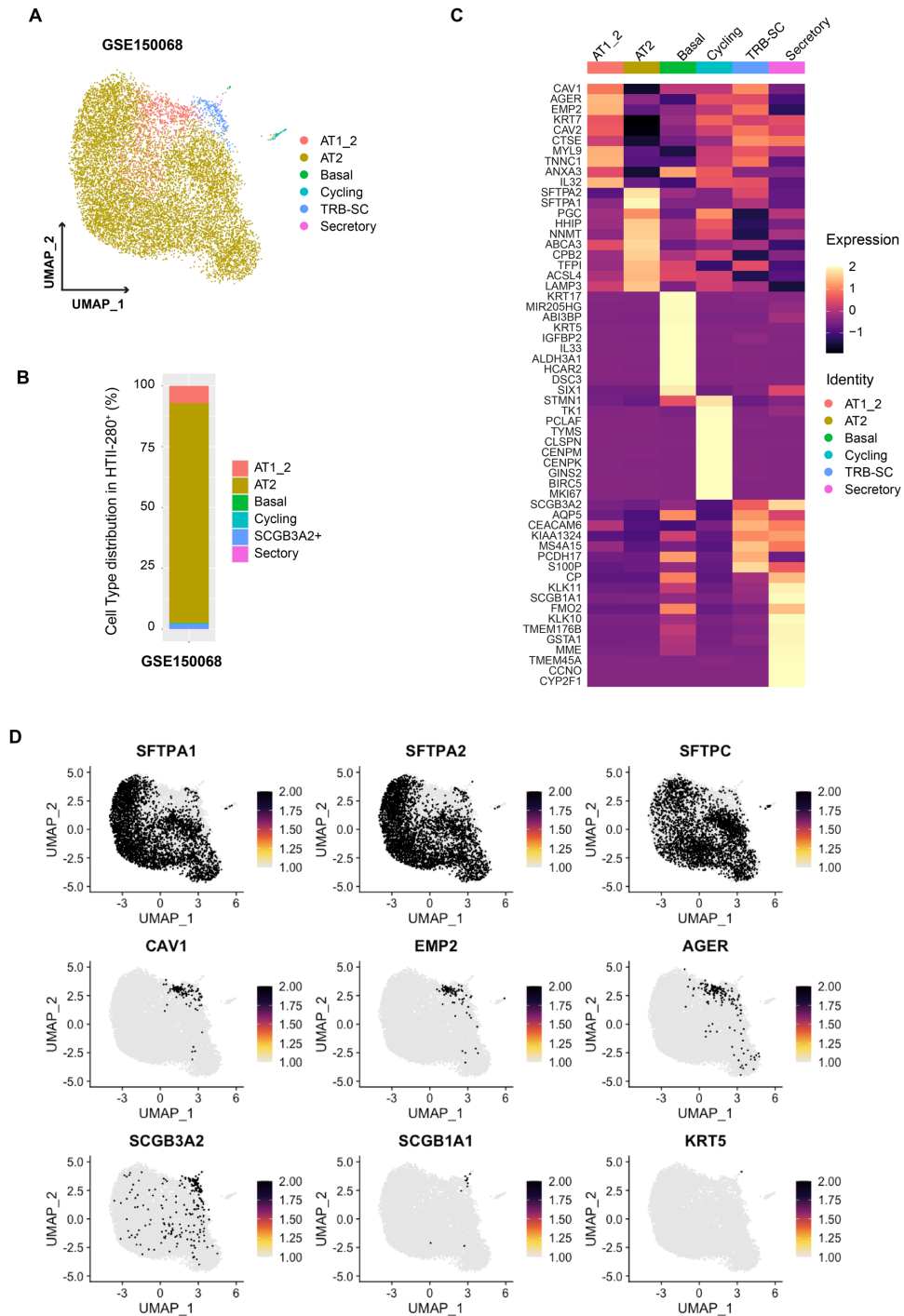


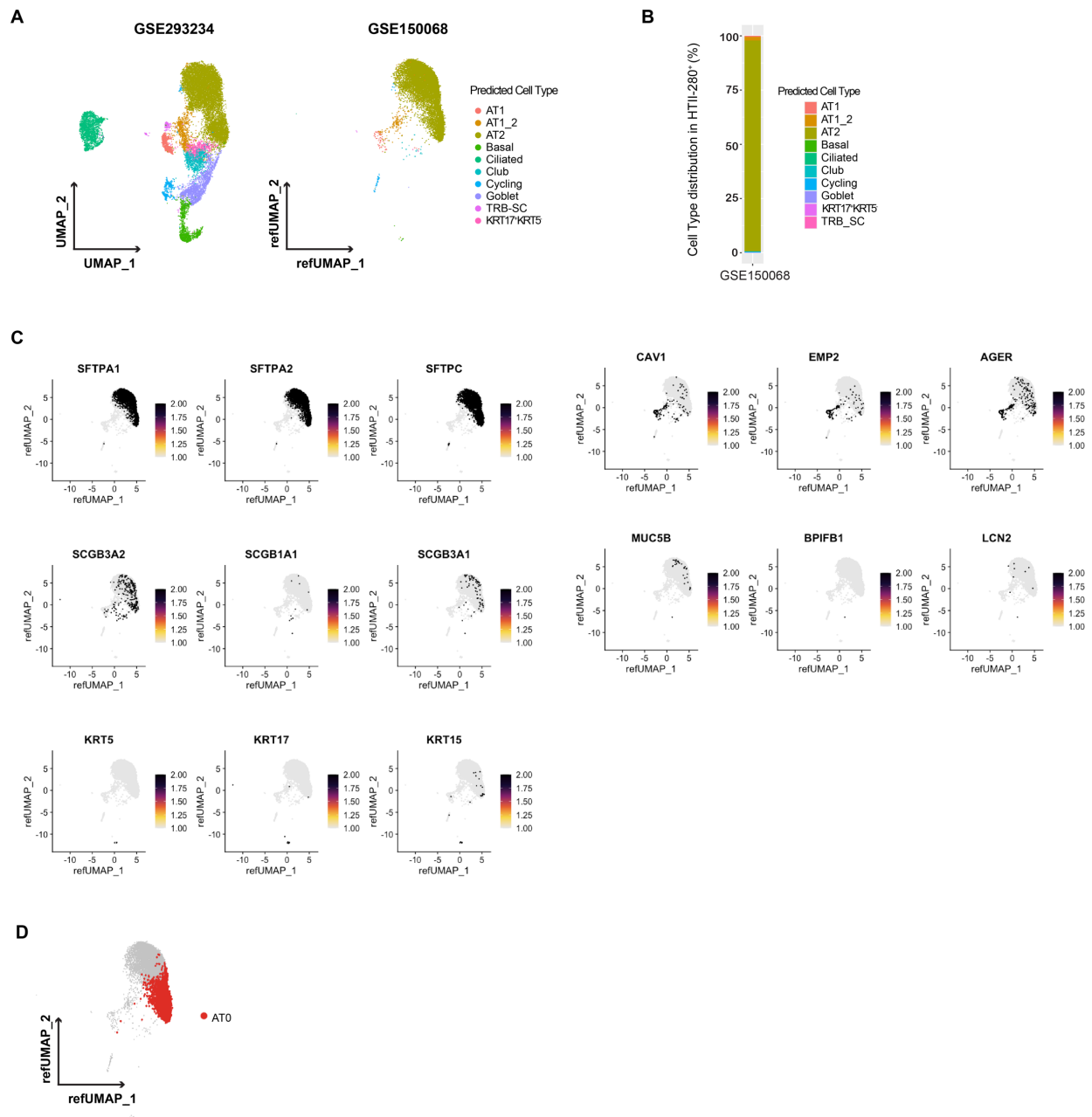
**Supplemental Figure 1. Cellular Heterogeneity of HTII-280–Labeled Epithelial Cells in Healthy and Fibrotic Human Lungs.**

A). Cell type distribution of each sample on UMAP. B). Cell type distribution of HTII-280<sup>+</sup> population of each sample. C). Feature Plot of cell type markers. D). Projection of potential AT0 cells on the UMAP based on expression of SCGB3A2 and SFTPC as illustrated in Supplemental Figure 1C. E). Representative IF staining of HTII-280, SFTPC and SCGB3A2 in IPF explant tissue. Arrows indicates HTII-280<sup>+</sup>SFTPC<sup>+</sup>SCGB3A2<sup>+</sup> cells, \* indicates HTII-280<sup>+</sup>SFTPC<sup>-</sup>SCGB3A2<sup>+</sup> cells.



**Supplemental Figure 2. Unbiased clustering of HTII-280<sup>+</sup> cells in GSE150068.**

A). Cell type distribution of GSE150068 on UMAP using unbiased clustering. B). Cell type distribution of HTII-280<sup>+</sup> population in percentage. C). Heatmap of top10 cell type specific marker genes. D). Feature Plot of cell type markers.



**Supplemental Figure 3. Reference-based projection of HTII-280<sup>+</sup> cells in GSE150068.**

A). Predicted cell type distribution of GSE150068 on UMAP using reference-based projection with our data from GSE293234. B). Predicted cell type distribution of HTII-280<sup>+</sup> population in percentage. C). Feature Plot of cell type markers. D). Projection of potential AT0 cells on the UMAP based on expression of SCGB3A2 and SFTPC.