

## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1-10

Description: This file contains the following 10 data sheets:

Supplementary Data 1: Differentially expressed genes (DEGs) in monocytes of progressive vs stable COVID-19 patients

Supplementary Data 2: DEGs in CD4<sup>+</sup> T cells of progressive vs stable COVID-19 patients

Supplementary Data 3: DEGs in CD8<sup>+</sup> T cells of progressive vs stable COVID-19 patients

Supplementary Data 4: DEGs in B cells of progressive vs stable COVID-19 patients

Supplementary Data 5: TotalSeq-C human panel for CITE-seq

Supplementary Data 6: CITE-seq de-hashing statistics and barcodes

Supplementary Data 7: CITE-seq panel for annotation

Supplementary Data 8: Gene Set Enrichment Analysis (GSEA) custom gene sets

Supplementary Data 9: Ligand-receptor pairs for the connectome analysis

Supplementary Data 10: P values for gene expression comparisons presented in the figure panels