S1 Table. Summary of the data sets used in this study.

<table>
<thead>
<tr>
<th>Data set</th>
<th>Description</th>
<th>PubMed ID and/or GEO</th>
</tr>
</thead>
</table>
| Blanco-Melo D et al., Cell. 2020  | Alias: SARS2-DEG  
Purpose: Drug screen and comorbidity identification, GSEA  
Groups: Human bronchial epithelial cells infected with SARS-CoV-2 (3 replicates) vs. uninfected (3 replicates) | 32416070 GSE147507   |
| Bojkova D et al., Nature. 2020    | Alias: SARS2-DEP  
Purpose: Drug screen and comorbidity identification, GSEA  
Groups: Human Caco-2 cells infected with SARS-CoV-2 vs. uninfected | 32408336             |
| Zhou Y et al., Cell Discov. 2020  | Alias: HCoV-PPI  
Purpose: Drug screen and comorbidity identification  
134 strong literature evidence-based pan-human coronavirus target host proteins including 15 newly added proteins | 32194980             |
| Gordon DE et al., Nature. 2020    | Alias: SARS2-PPI  
Purpose: Drug screen and comorbidity identification  
332 proteins involved in the protein-protein interactions with 26 SARS-CoV-2 viral proteins identified by affinity purification-mass spectrometry | 32353859             |
| Modena BD et al., Am J Respir Crit Care Med. 2014 | Purpose: To provide DEGs in asthma patients bronchial epithelial cells of 27 control samples, 72 mild asthma samples, and 56 severe asthma samples were obtained by bronchoscopy with endobronchial epithelial brushing | 25338189 GSE63142     |
| Weathington N et al., Am J Respir Crit Care Med. 2019 | Purpose: To provide DEGs in asthma patients bronchial epithelial cells of 38 control samples, 72 mild asthma samples, and 44 severe asthma samples were available by bronchoscopy with endobronchial epithelial brushing | 31161938 GSE130499    |
| Lukassen S et al., EMBO J. 2020   | Purpose: Single-cell study for understanding the association between COVID-19 and asthma  
This data set contains single-cell data of normal lung and primary human bronchial epithelial cells | 32246845             |
| Martin JC et al., Cell. 2019      | Purpose: Single-cell study for understanding the association between COVID-19 and IBD  
This data set contains both inflamed and uninflamed cells from the ileal samples of 8 patients with Crohn’s disease | 31474370 GSE134809    |
| Yuan S et al., Nat Commun. 2019   | Alias: MERS  
Purpose: To provide DEGs for GSEA  
Groups: MERS-CoV infected Calu-3 cells (3 replicates) vs. uninfected (3 replicates) | 30631056 GSE122876    |
| Sims AC et al., J Virol. 2013     | Alias: SARSa  
Purpose: To provide DEGs for GSEA  
Groups: SARS-CoV-1 infected Calu-3 cells (3 replicates) vs. uninfected (3 replicates) | 23365422 GSE33267     |
| Reghunathan R et al., BMC Immunol. 2005 | Alias: SARSa  
Purpose: To provide DEGs for GSEA  
Groups: SARS-CoV-1 infected patients’ peripheral blood (10 samples) vs. normal blood samples (4 samples) | 15655079 GSE1739      |

GSEA, Gene set enrichment analysis. DEG, differentially expressed gene. DEP, differentially expressed protein. PPI, protein-protein interaction. IBD, inflammatory bowel disease.