Table S1. Details of the scRNA-seq datasets used in this study.

| Dataset | Pathogen | Samples included | Citation | GEO/SRA access number | Description of the experiment |
|---|---|---|---|---|---|
| **Human Influenza A (H1N1)** | H1N1 | Cal07_Bystander<br>Cal07_Mock<br>Cal07_Infected | https://pubmed.ncbi.nlm.nih.gov/32614923/ | GSE143167 / SRP239555 | In vitro experiments before and after H1N1 infection of human lung cells were sequenced using 10X genomics technology. |
| **Human Influenza A (H3N2)** | N3N2 | Perth09_Bystander<br>Perth09_Mock<br>Perth09_Infected | https://pubmed.ncbi.nlm.nih.gov/32614923/ | GSE143167 / SRP239555 | In vitro experiments before and after H3N2 infection of human lung cells were sequenced using 10X genomics technology. |
| **In vitro HIV infection** | HIV-1 | HIV_01<br>HIV_02 | https://pubmed.ncbi.nlm.nih.gov/30282021/ | NA / SRP134859 | In vitro infection of primary human CD4 T cells with HIV was sequenced by 10X Genomics technology. |
| **Patients infected with SARS-CoV-2** | SARS-CoV-2 | nCov_C145<br>nCov_C146 | https://pubmed.ncbi.nlm.nih.gov/32398875/ | GSE145926 / SRP250732 | BALF cells from COVID-19 patients were sequenced by 10X Genomics technology. |
| **In vitro EBV infection** | EBV | LCL_777_B958 | https://pubmed.ncbi.nlm.nih.gov/33501914/ | GSE158275 / SRP284226 | In vitro infection of primary human B cells with EBV strains B95-8 and sequenced by 10X Genomics technology. |
| **Patients infected with *Helicobacter pylori*** | H. pylori | Hpylori_P5<br>Hpylori_P7 | https://pubmed.ncbi.nlm.nih.gov/31067475/ | GSE134520 / SRP215370 | Gastric antral mucosae cells from patients were sequenced by 10X Genomics technology. |