

Description of Additional Supplementary Files

File name: Supplementary Data 1

Description: HC and LC V and J germline alleles identified with IgDiscover in H03 and I10. Both nucleotide sequences and translated amino acid sequences are reported.

File name: Supplementary Data 2

Description: Summary of single cell tracing status at paired VDJ level and lineage level.

File name: Supplementary Data 3

Description: Genetic information of spike-specific cloned mAbs.

File name: Supplementary Data 4

Description: Lineage 10644 phylogenetic tree SHM count for total VDJ sequence, V sequence and J sequence.

File name: Supplementary Data 5

Description: SARS-CoV-2 RBD amino acid variant frequencies based on Outbreak.info reports.