Description of Additional Supplementary Files

File name: Supplementary Data 1

Description: COVID-19 Sample Information.

File name: Supplementary Data 2

Description: Epitopes in the random and focused libraries.

File name: Supplementary Data 3

Description: Sensitivity and specificity of IMUNE epitope motifs in SERA or ELISA positive SARS-

CoV-2.

File name: Supplementary Data 4 **Description:** GISAID strains data.