

Figure S1. Serological responses to SARS-CoV-2 RBD and NTD protein among COVID-19 patients with different severity

(A-B) Binding of plasma samples to SARS-CoV-2 RBD (A), SARS-CoV-2 NTD (B) were tested by ELISA assay from for 20 severe, 38 moderate and 51 asymptomatic patients. The OD₄₅₀ value from each dot in the figure was taken by means of two replicates in the same experiment. P-values were caluated using two-tailed paired t-test (****P<0.001, ***P<0.001, *P<0.05, ns: no sigfinicant). Error bars represent strandard deviation. Each sample was tested as duplicates in each assay and the results were confirmed by two independent experiments.



Figure S2. Sequence alignment for SARS-CoV-2 and SARS-CoV RBD and NTD protein

(A-B) The RBD and NTD domain of SARS-CoV (NCBI Reference Sequence: NC_004718.3) and SARS-CoV-2 (NCBI Reference Sequence: NC_045512.2) were aligned by MUSCLE (https://www.ebi.ac.uk/Tools/msa/muscle/). Residues highlighted with green and yellow represent identical and similar residues respectively. The percentage identity and similarity are calculated with a Blosum 62 score matrix using Geneious Prime.

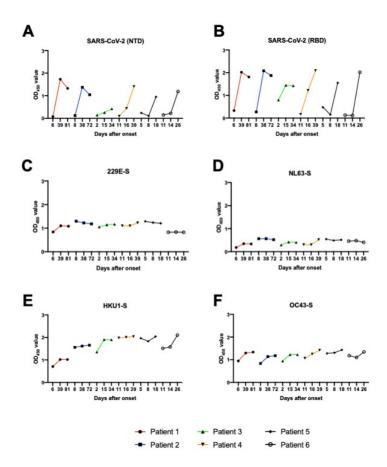


Figure S3. Longitudinal serological analysis to human coronaviruses

(A-F) Binding of longitudinal plasma samples against SARS-CoV-2 NTD (A), SARS-CoV-2 RBD (B), 229E-Spike (C), NL63-Spike (D), HKU1-Spike (E) and OC43-Spike protein (F) from six COVID-2019 patients were measured by ELISA.