

-Supplementary information-

SARS-CoV-2 proteome microarray for mapping COVID-19 antibody

interactions at amino acid resolution

2 Supplementary Tables

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Supplementary Tables

Supplementary Table1. The layout of SARS-COV-2 proteome microarray.

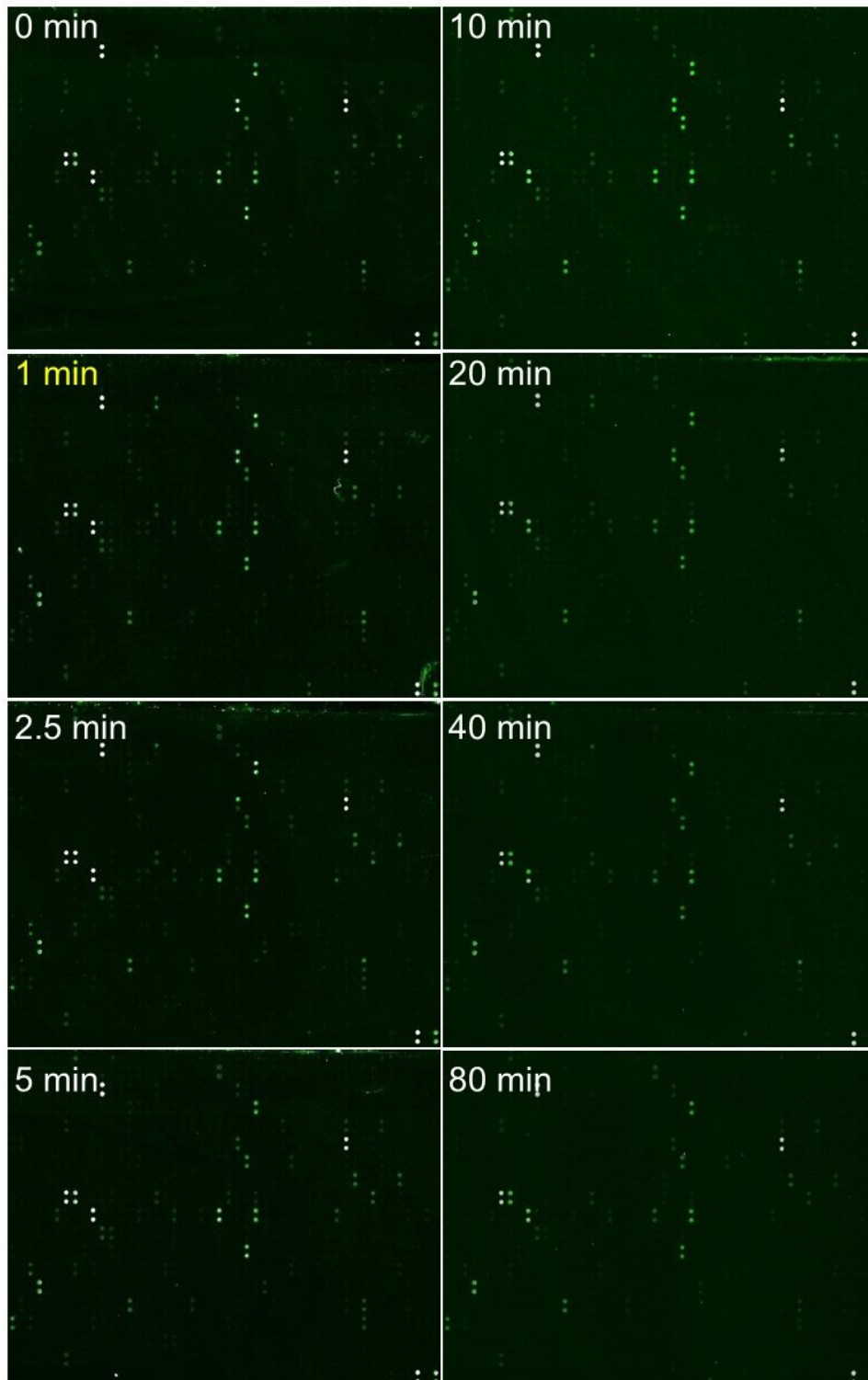
Supplementary Table2 Characteristics of early-stage COVID-19 patients.

	COVID-19 patients (n=10)	Control patients (n=10)
Male	4 (40.0%)	2 (20.0%)
Female	6 (60.0%)	8 (80.0%)
Age, year	43.2 (7.0-68.0)	37.5 (32.0-57.0)
2019-nCoV(+)	10 (100%)	0
FluA-RNA(+)	0	0
FluB RNA(+)	0	0
RSV RNA(+)	0	0
Exposure history	9 (90.0%)	2 (20.0%)
Fever	8 (80.0%)	10 (100.0%)
Headache	0	2 (20.0%)
Cough	4 (40.0%)	3 (30.0%)
Sputum	2 (20.0%)	2 (20.0%)
Myalgia	1 (10.0%)	1 (10.0%)
Fatigue	0	0
Diarrhoea	0	0
Dyspnoea	2 (20.0%)	0
Nausea or vomiting	0	0
Onset of symptom, Median \pm SD, days	3.0 \pm 5.92	2.0 \pm 1.87
Ground-glass opacity	8 (80.0%)	6 (60.0%)
Bilateral pulmonary infiltration	8 (80.0%)	4 (40.0%)

Data are median (IQR) or n (%).

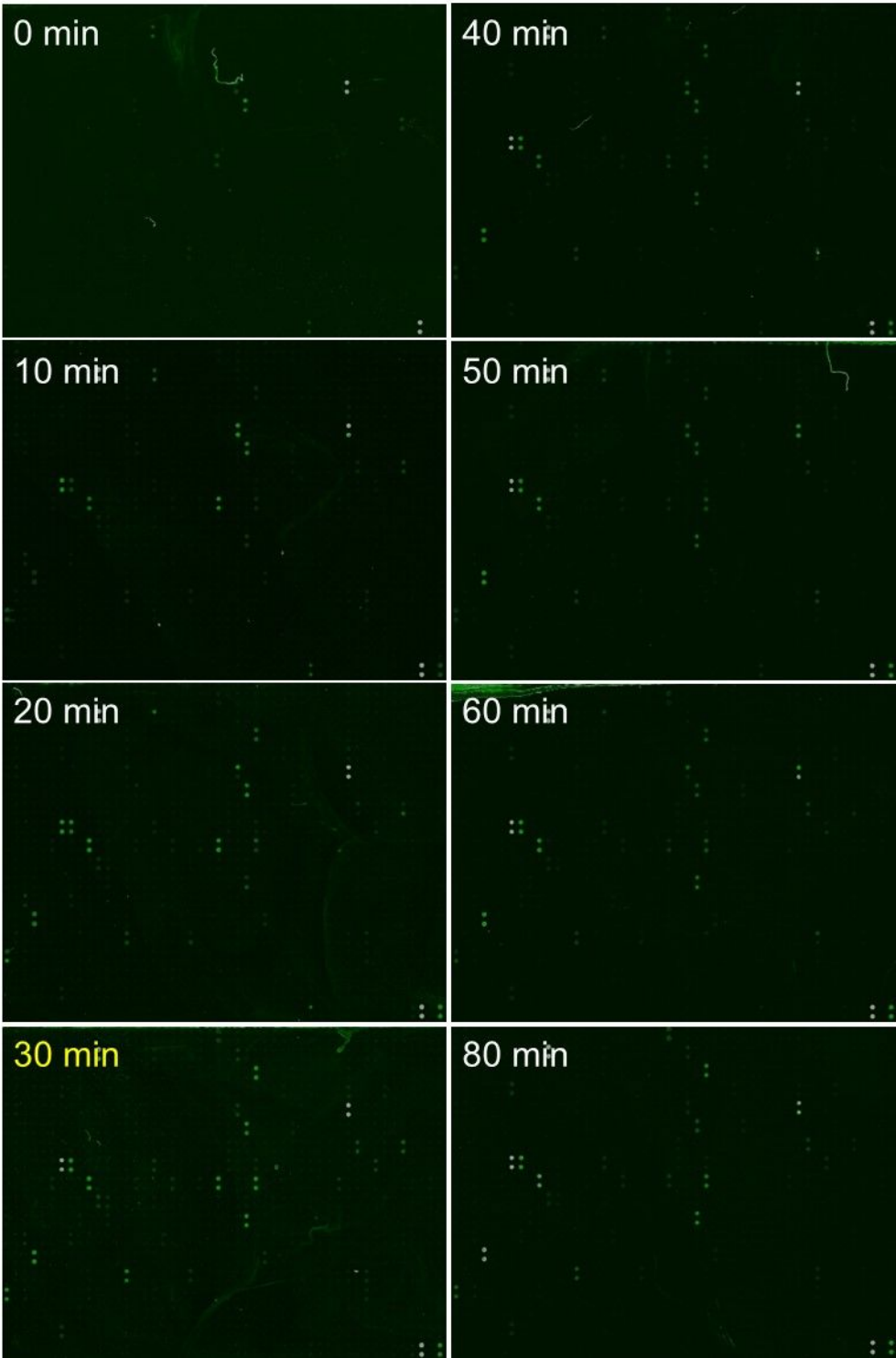
Supplementary Figures

Blocking with 5% milk



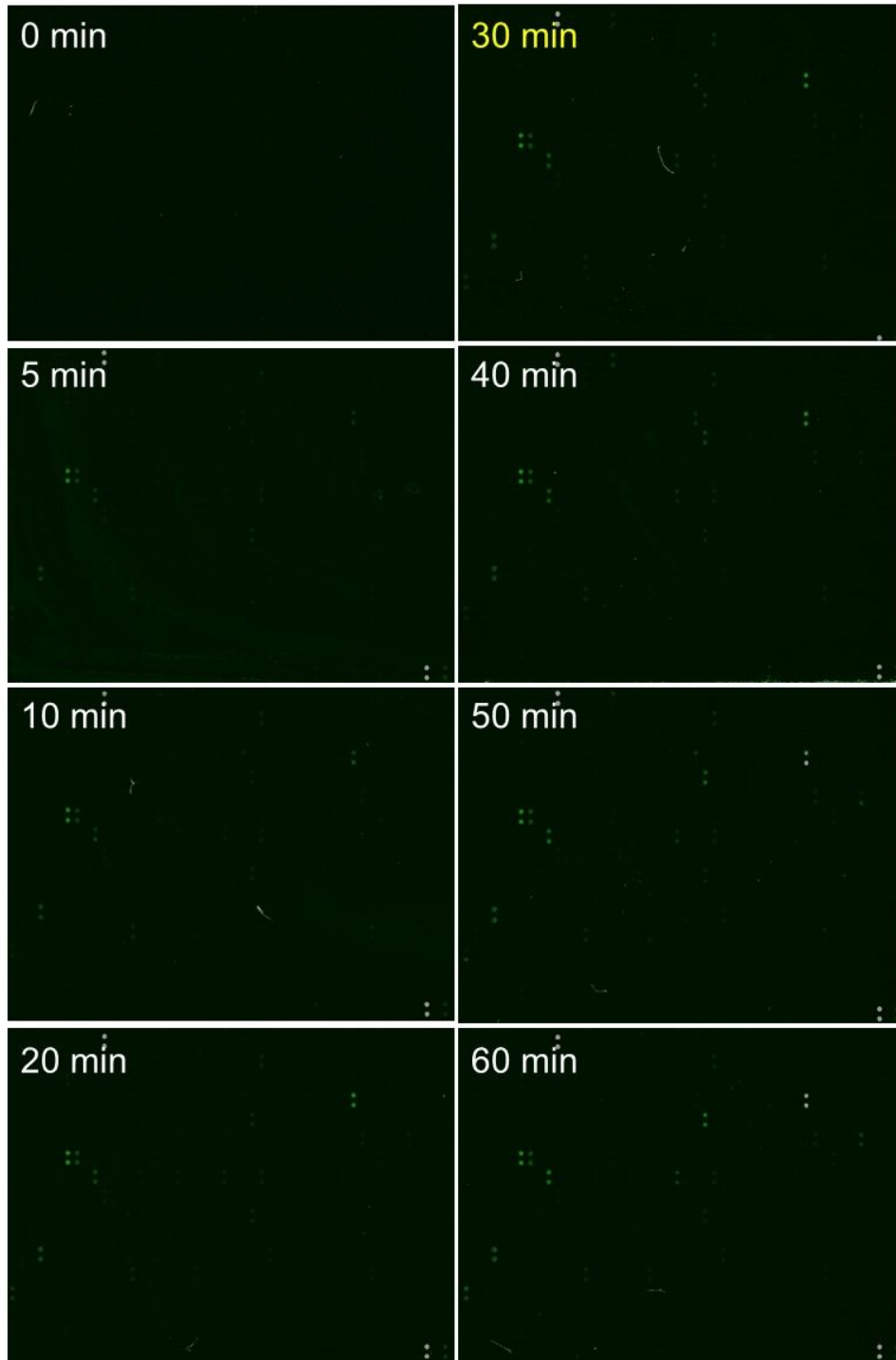
Supplementary Figure 1. A comparison of different blocking incubation lengths on the SARS-COV-2 proteome microarray

Serum incubation

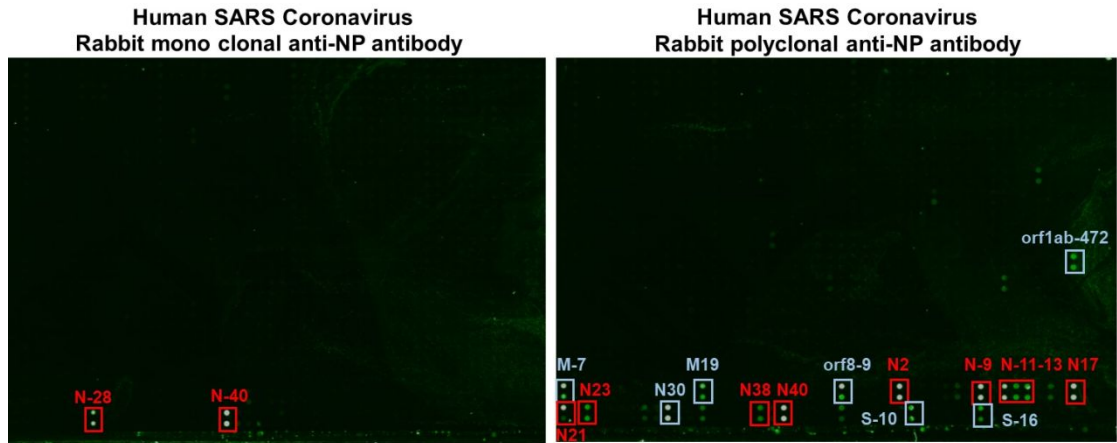


Supplementary Figure 2. A comparison of different serum sample incubation lengths on the SARS-COV-2 proteome microarray

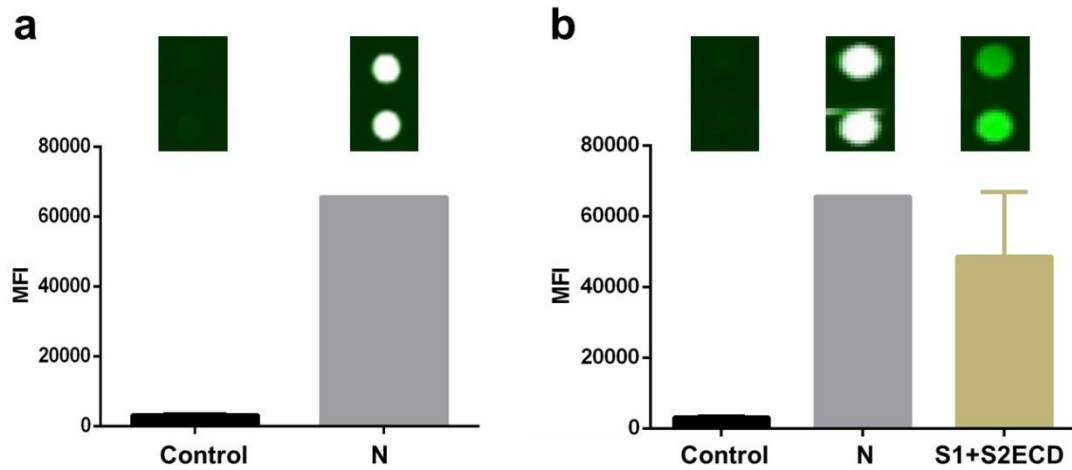
Incubation with the detection antibody



Supplementary Figure 3. A comparison of different detection antibody incubation lengths on the SARS-COV-2 proteome microarray



Supplementary Figure 4. Fluorescent detection image of rabbit anti-SARS-CoV-1 N-protein antibodies using the SARS-CoV-2 proteome microarray. Red = antibody-peptide interactions with peptides from N proteins. Blue = cross-reactive antibody-peptide interactions with peptides from non-N proteins.



Supplementary Figure 5. Binding of anti-SARS-CoV-1 antibodies to full-length SARS-CoV-2 proteins. Interactions of the rabbit (a) monoclonal and (b) polyclonal antibodies with the full-length target proteins. A streptavidin protein was used as the control. S1+S2ECD = S-protein consisting of subunit 1 (S1) and subunit 2 (S2) extracellular domain (ECD).