

## **SARS-CoV-2 S1 and N-based serological assays reveal rapid seroconversion and induction of specific antibody response in COVID-19 patients**

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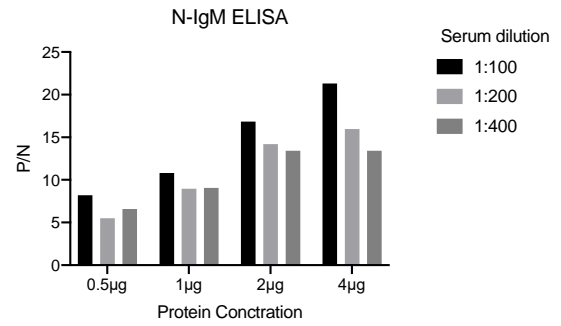
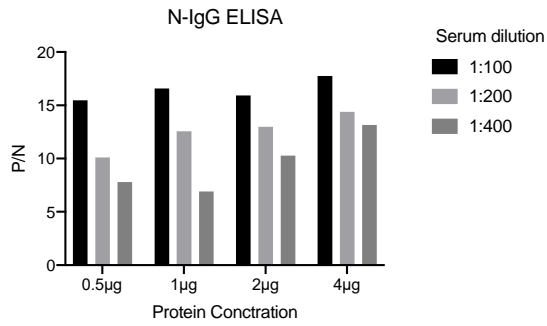
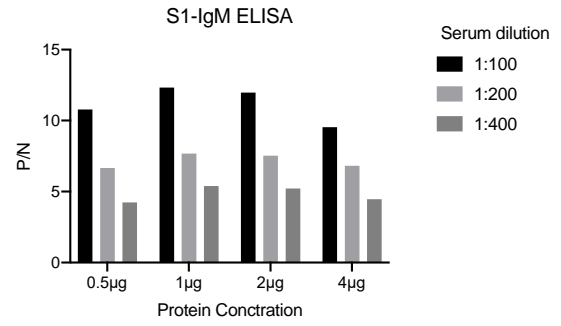
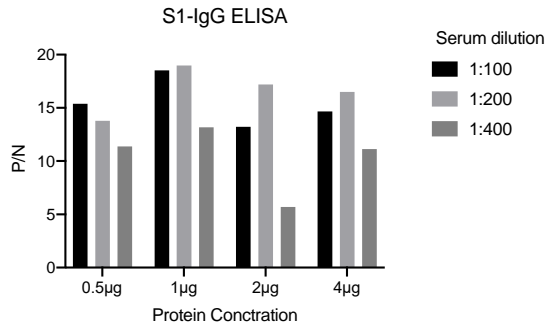
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**Key words:** SARS-CoV-2; COVID-19; ELISA, Antibodies; Serology

**Running title:** ELISAs for COVID-19 antibodies testing

**Supplementary Table 1. Area under the ROC curve (AUC) for the different developed ELISAs based on sample time collection.**

| <b>ELISA</b> | <b>Samples</b> | <b>AUC <math>\pm</math> SD</b> | <b>95% CI</b> | <b>P value</b> |
|--------------|----------------|--------------------------------|---------------|----------------|
| S1 IgG       | All samples    | 0.940 $\pm$ 0.024              | 0.892 - 0.986 | <0.0001        |
|              | Week 1 samples | 0.746 $\pm$ 0.091              | 0.567 - 0.925 | 0.0099         |
|              | Week 2 samples | 0.973 $\pm$ 0.020              | 0.935 - 1.000 | <0.0001        |
|              | Week 3 samples | 1.000 $\pm$ 0.000              | 1.000 - 1.000 | <0.0001        |
|              | Week 4 samples | 1.000 $\pm$ 0.000              | 1.000 - 1.000 | 0.0002         |
| S1 IgM       | All samples    | 0.963 $\pm$ 0.014              | 0.935 - 0.990 | <0.0001        |
|              | Week 1 samples | 0.829 $\pm$ 0.052              | 0.727 - 0.931 | 0.0006         |
|              | Week 2 samples | 0.990 $\pm$ 0.007              | 0.977 - 1.000 | <0.0001        |
|              | Week 3 samples | 1.000 $\pm$ 0.000              | 1.000 - 1.000 | <0.0001        |
|              | Week 4 samples | 1.000 $\pm$ 0.000              | 1.000 - 1.000 | 0.0002         |
| N IgG        | All samples    | 0.971 $\pm$ 0.015              | 0.942 - 1.000 | <0.0001        |
|              | Week 1 samples | 0.863 $\pm$ 0.065              | 0.736 - 0.990 | 0.0001         |
|              | Week 2 samples | 0.994 $\pm$ 0.005              | 0.985 - 1.000 | <0.0001        |
|              | Week 3 samples | 1.000 $\pm$ 0.000              | 1.000 - 1.000 | <0.0001        |
|              | Week 4 samples | 1.000 $\pm$ 0.000              | 1.000 - 1.000 | 0.0002         |
| N IgM        | All samples    | 0.871 $\pm$ 0.035              | 0.803 - 0.940 | <0.0001        |
|              | Week 1 samples | 0.528 $\pm$ 0.111              | 0.311 - 0.746 | 0.7655         |
|              | Week 2 samples | 0.982 $\pm$ 0.009              | 0.965 - 1.000 | <0.0001        |
|              | Week 3 samples | 0.929 $\pm$ 0.038              | 0.854 - 1.000 | <0.0001        |
|              | Week 4 samples | 0.884 $\pm$ 0.067              | 0.753 - 1.000 | 0.0037         |



**Supplementary Figure 1.** checkerboard titration to determine the optimum antigen concentration and dilution of serum samples in the developed SARS-CoV-2 ELISAs