| Assays (Type)         | Method | Manufacturer | Isotype and antibody | Target protein | Run time (mins) | Manufacturer’s claim of sensitivity | Manufacturer’s claim of Specificity |
|-----------------------|--------|--------------|----------------------|----------------|----------------|-------------------------------------|-----------------------------------|
| Genscript cPass       | ELISA  | Genscript    | IgG – NAB            | RBD unit of S1 | 180            | 93.8%                               | 99.4%                             |
| Diasorin- S1/S2 IgG   | CLIA   | Diasorin     | IgG- total Ab        | S1/S2          | 35             | 93.9% - 99.5%                       | 98.6% - 99.7%                     |
| Alinity IgG II        | CMIA   | Abbott       | IgG- total Ab        | RBD unit of S1 | 20             | 89.9% - 99.7%                       | 99.2% - 99.8%                     |
| Diasorin- TrimericS IgG | CLIA  | Diasorin     | IgG- total Ab        | Trimeric SARS-CoV-2 spike protein | 20 | 94.5%-99.6% | 99.0%-99.7% |
| Roche Elecsys         | CLIA   | Roche        | IgG & IgM- total Ab  | RBD unit of S1 | 20             | 99.91 % -100%                       | 98.1-99.3 %                       |
| AESKULISA             | ELISA  | AESKU        | IgG- total Ab        | S1             | 180            | 95.2 %                              | > 99 %                            |
Table S2: Results of six commercially available serological assays.

| Assay                     | PRNT          | Total |
|---------------------------|---------------|-------|
|                           | Positive      | Negative |
| Genscript cPass           | 49            | 3     | 125   |
|                           | 20            | 53    |
| Diasorin-S1/S2 IgG        | 40            | 3     | 104   |
|                           | 13            | 48    |
| Alinity IgG II            | 52            | 15    | 104   |
|                           | 1             | 36    |
| Diasorin-TrimericS IgG    | 45            | 5     | 103   |
|                           | 8             | 45    |
| Roche Elecsys             | 48            | 28    | 96    |
|                           | 0             | 20    |
| AESKULISA                 | 48            | 13    | 99    |
|                           | 4             | 34    |
Table S3: Area under the curve (AUC) for the serological assays

| Antibody tests             | AUC   | 95% Confidence Interval |
|----------------------------|-------|-------------------------|
| Genscript cPass            | 0.939 | (0.888 - 0.990)         |
| Diasorin-S1/S2 IgG        | 0.935 | (0.885 – 0.986)         |
| Alinity IgG II            | 0.860 | (0.784 -0.936)          |
| Diasorin-TrimericS IgG    | 0.953 | (0.912 - 0.994)         |
| Roche Elecsys             | 0.839 | (0.751 - 0.927)         |
| AESKULISA                 | 0.928 | (0.871 - 0.984)         |
### Table S4: Comparing AUC from the ROC curves

|                  | Genscript | Diasorin S1/S2 | Alinity IgG II | Diasorin-TrimericS IgG | Roche Elecsys | AESKULISA |
|------------------|-----------|----------------|----------------|------------------------|---------------|-----------|
| cPass            | 0.901     | 0.044<sup>*</sup> | 0.644         | 0.016<sup>*</sup>     | 0.742         |           |
| IgG              |           |                 |                |                        |               |           |
| Diasorin-S1/S2   | 0.075     | 0.574          | 0.031<sup>*</sup> |                        | 0.843         |           |
| IgG              |           |                 |                |                        |               |           |
| Alinity IgG II  |           |                 | 0.022<sup>*</sup> | 0.678                 | 0.117         |           |
| Diasorin-TrimericS IgG |           |                 | 0.008<sup>*</sup> |                        | 0.453         |           |
| Roche Elecsys    |           |                 |                |                        | 0.052         |           |
| AESKULISA        |           |                 |                |                        |               |           |

* p<0.05
Table S5: Cohen’s Kappa coefficient for agreement with PRNT results

| Serological assays            | Cohen’s Kappa coefficient |
|-------------------------------|---------------------------|
| Genscript cPass               | 0.638*                    |
| Diasorin-S1/S2 IgG            | 0.693*                    |
| Alinity IgG II                | 0.691*                    |
| Diasorin-TrimericS IgG        | 0.750*                    |
| Roche Elecsys                 | 0.406*                    |
| AESKULISA                     | 0.652*                    |

* p<0.001