

Supplementary information

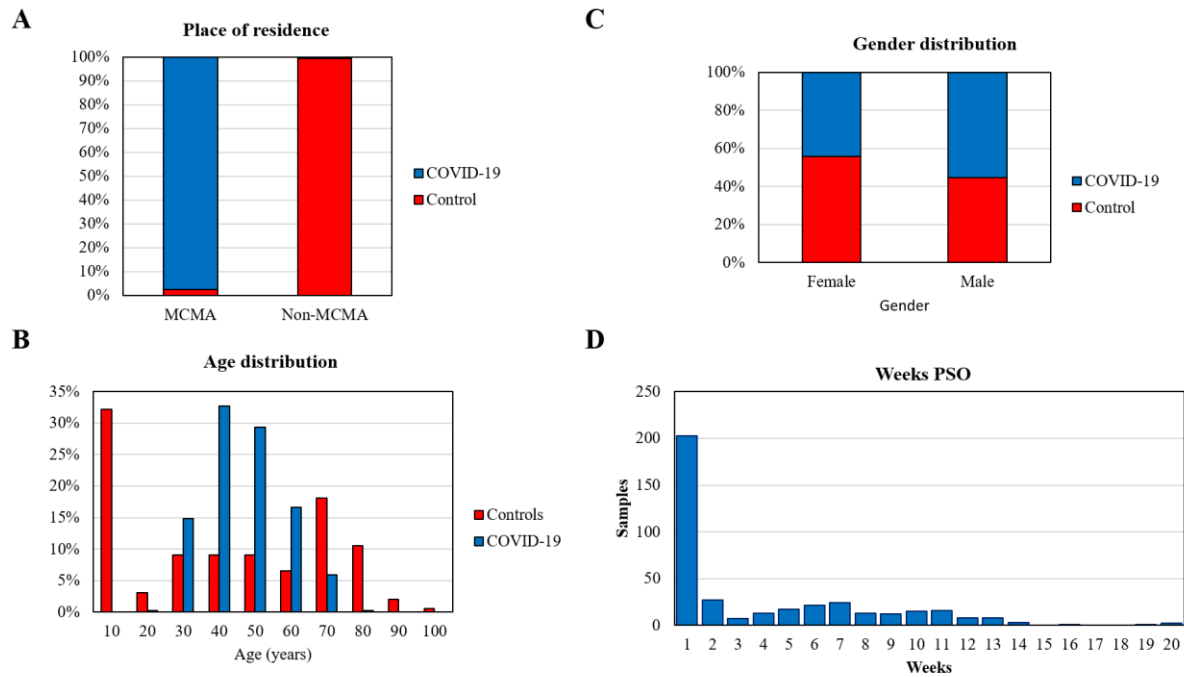


Figure S1. Sociodemographic characteristics and clinical evolution of serum donors for the validation panel. According to place of residence (A), age distribution (B), gender (C) and weeks post-symptom onset (PSO) of COVID-19 confirmed cases (D). Pre-pandemic serum samples (negative controls) are in red bars and COVID-19 cases are in blue bars. Mexico City Metropolitan Area (MCMA).

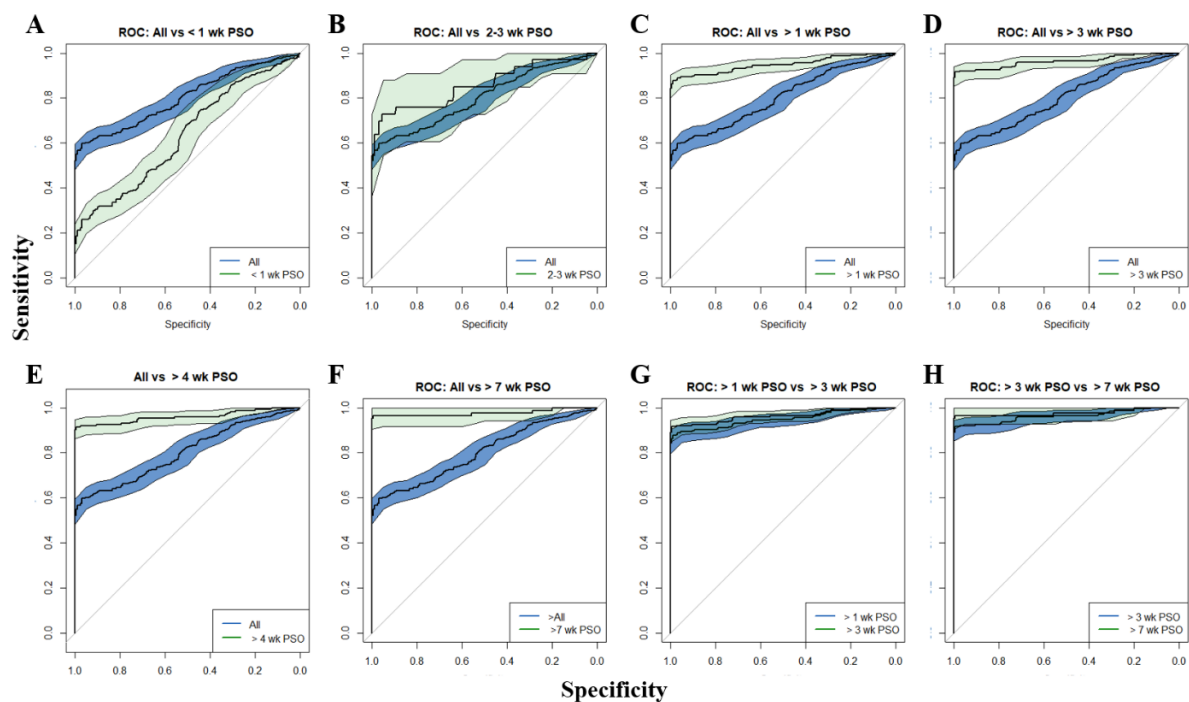


Figure S2. Comparison of Area Under the *Receiver Operating Characteristic* (ROC) curve of IgG anti-RBD ELISA at various days post-symptom onset (PSO). ROC comparison using all COVID-19 confirmed cases (regardless PSO) as reference at various times (weeks) post-symptom onset. Sensitivity confidence intervals (De Long) are shown in light green for each PSO and in blue for all (A-F). Analysis and graphs were generated with pROC [33]. Detailed ROC parameters and statistical comparisons are shown in Supplementary Table S1.

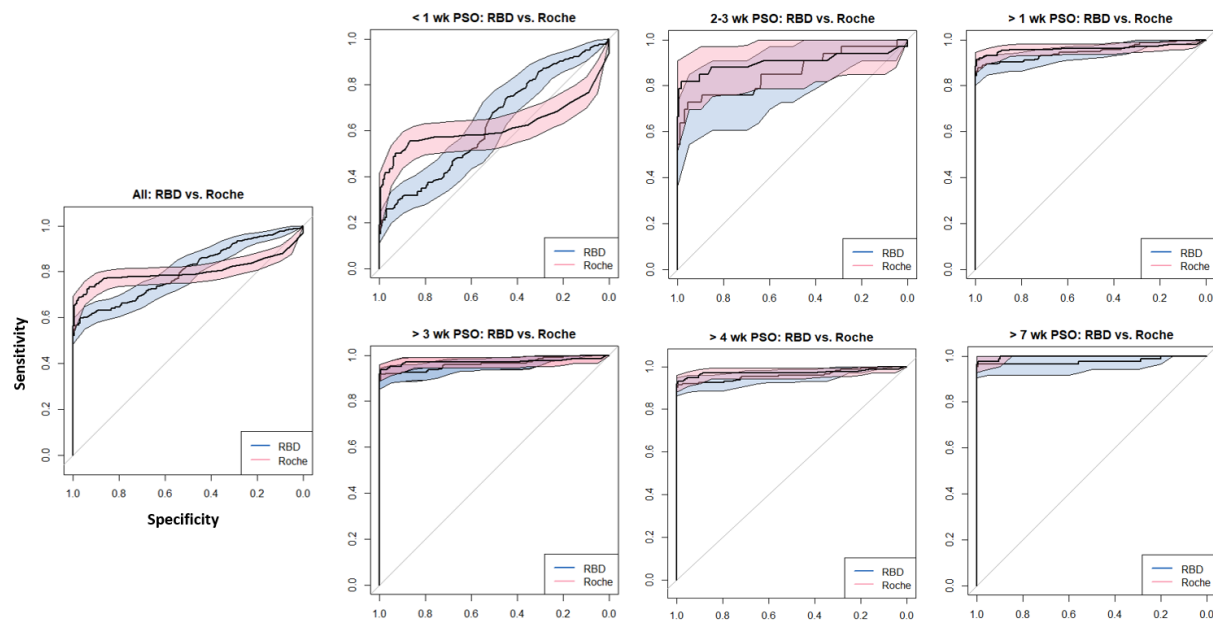


Figure S3. Area Under the *Receiver Operating characteristic* curve of RBD vs. Elecsys®. Comparison of ROC curves of anti-RBD ELISA vs. Elecsys® at various time points PSO. Blue and pink Sensitivity CI (De Long) correspond to anti-RBD ELISA and Elecsys®, respectively. Analysis and graphs were generated with pROC [34]. Detailed ROC parameters and statistical comparisons are in Supplementary Table S2.

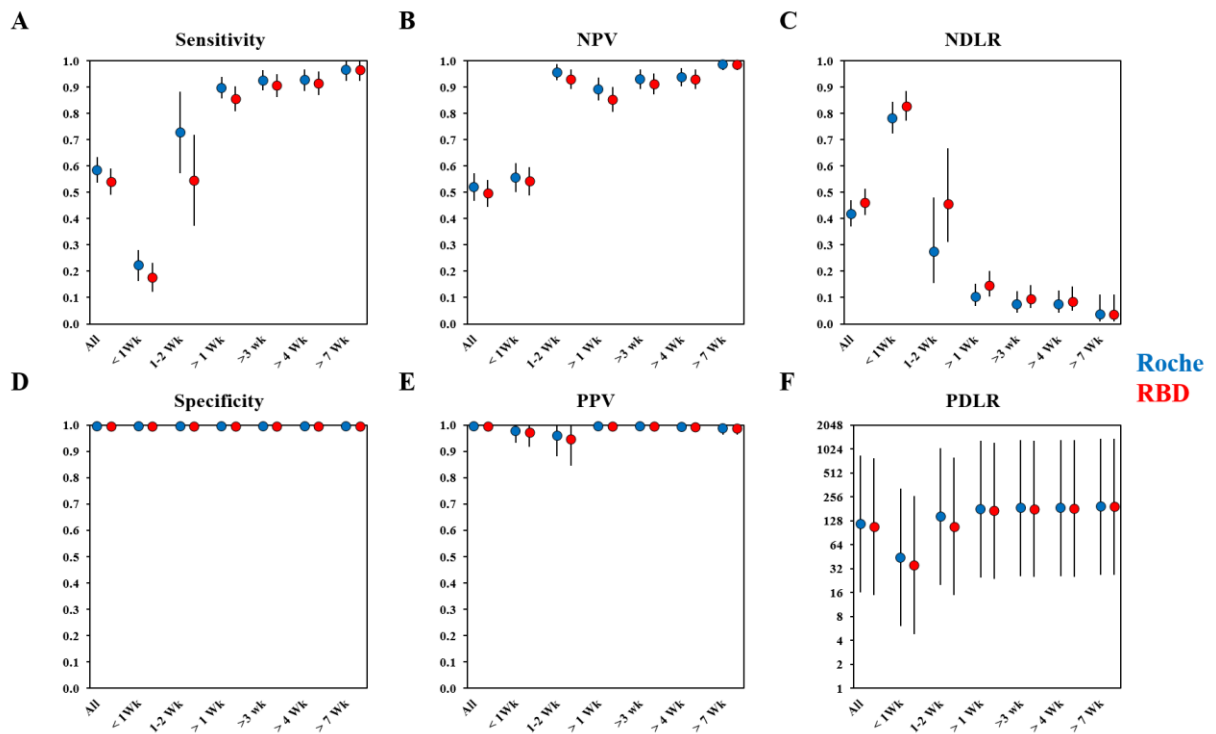


Figure S4. Diagnostic accuracy of anti-RBD ELISA and Elecsys® at different time points PSO. Sensitivity (A), Negative predictive value (B), Negative diagnostic likelihood ratio (C), Specificity (D), Positive predictive value (E) and Positive diagnostic likelihood ratio (F). Elecsys® (Roche. Blue dots) and anti-RBD ELISA (red dots).

Supplementary Table S1. Comparison of Area Under the *Receiver Operating Characteristic* Curve of IgG anti-RBD ELISA at various days post-symptom onset (PSO)

Reference	AUC Ref	CI Ref	Comparator	AUC comp	CI Comparator	pval
All	0.804	0.771-0.836	< 1 wk PSO	0.636	0.582, 0.69	< 0.001
			≥ 1 wk PSO	0.949	0.927, 0.971	< 0.001
			1-2 wk PSO	0.858	0.769, 0.947	0.26
			≥ 3 wk PSO	0.963	0.943, 0.983	< 0.001
			≥ 4 wk PSO	0.961	0.938, 0.983	< 0.001
			≥ 7 wk PSO	0.977	0.95, 1.0	< 0.001
≥ 1 wk PSO	0.949	0.927-0.971	≥ 3 wk PSO	0.963	0.943, 0.983	0.33
≥ 3 wk PSO	0.963	0.943-0.983	≥ 7 wk PSO	0.977	0.95, 1.0	0.42

Supplementary Table S2. Area Under the *Receiver Operating characteristic* curve of RBD vs. Elecsys®

Weeks PSO	Cases	Controls	AUC		AUC		P val	Power
			RBD	CI RBD	Elecsys®	CI Elecsys®		
All	438		0.80	0.77-0.83	0.80	0.77, 0.83	0.99	0.03
< 1 wk	203		0.64	0.58-0.69	0.62	0.56, 0.68	0.66	0.09
1-2 wk	33		0.86	0.76-0.94	0.90	0.81, 0.99	0.33	0.16
≥ 1wk	235	199	0.95	0.92-0.97	0.96	0.94, 0.98	0.26	0.20
≥ 3 wk	202		0.96	0.94-0.98	0.97	0.95, 0.99	0.46	0.12
≥ 4 wk	176		0.96	0.93-0.98	0.97	0.95, 0.99	0.32	0.14
≥ 7 wk	85		0.98	0.95-1.0	1.00	0.99, 1.0	0.12	0.11

Supplementary Table S3. Agreement between RBD ELISA and Elecsys®

	N	%-agree	Cohen's Kappa	p	Maxwell's RE
All	637	91.1	0.81	0.0	0.82
< 1 wk	402	91.5	0.52	0.0	0.83
≥ 1 wk	434	94.2	0.88	0.0	0.88
1-2 wk	232	95.7	0.75	0.0	0.91
≥ 3 wk	401	95.8	0.91	0.0	0.92
≥ 4 wk	375	96.3	0.92	0.0	0.93
≥ 7 wk	284	97.9	0.95	0.0	0.96

Supplementary Table S4. Partial Area Under the *Receiver Operating Characteristic* curve (1-0.9 specificity) of RBD vs Elecsys®

Weeks PSO	C19	Control	pAUC RBD	pAUC Elecsys®	p value
All	438	199	0.059	0.070	7.07E-07
< 1 wk	203	199	0.025	0.043	8.43E-07
1-2 wk	33	199	0.069	0.081	0.10
≥ 1wk	235	199	0.089	0.093	0.03
≥ 3 wk	202	199	0.092	0.094	0.13
≥ 4 wk	176	199	0.092	0.094	0.20
≥ 7 wk	85	199	0.096	0.098	0.54